CPC COOPERATIVE PATENT CLASSIFICATION

C07C ACYCLIC OR CARBOCYCLIC COMPOUNDS

NOTE

In this subclass, the following terms or expressions are used with meanings indicated:

- "bridged" means the presence of at least one fusion other than ortho, peri or spiro;
- two rings are "condensed" if they share at least one ring member, i.e. "spiro" and "bridged" are considered as condensed;
- "condensed ring system" is a ring system in which all rings are condensed among themselves;
- "number of rings" in a condensed ring system equals the number of scissions necessary to convert the ring system into one acyclic chain;
- "quinones" are compounds derived from compounds containing a six-membered aromatic ring or a system comprising six-membered aromatic rings (which system may be condensed or not condensed) by replacing two or four CH groups of the six-membered aromatic rings by C=O groups, and by removing one or two carbon-to-carbon double bonds, respectively, and rearranging the remaining carbon-to-carbon double bonds to give a ring or ring system with alternating double bonds, including the carbon-to-oxygen bonds; this means that acenaphthenequinone or camphorquinone are not considered as quinones.

In this subclass, in the absence of an indication to the contrary, a process is classified in the last appropriate place.

In this subclass, in the absence of an indication to the contrary, "quaternary ammonium compounds" are classified with the corresponding "non-quaternised nitrogen compounds".

For the classification of compounds in groups C07C 1/00 to C07C 71/00 and C07C 401/00 to C07C 409/00:

- a compound is classified considering the molecule as a whole (rule of the "whole molecule approach");
- a compound is considered to be saturated if it does not contain carbon atoms bound to each other by multiple bonds;
- a compound is considered to be unsaturated if it contains carbon atoms bound to each other by multiple bonds, which includes six-membered aromatic ring, unless otherwise specified or implicitely derivable from the subdivision.

For the classification of compounds in groups C07C 201/00 to C07C 395/00, i.e. after the functional group has been determined according to the"last place rule", a compound is classified according to the following principles:

- compounds are classified in accordance with the nature of the carbon atom to

which the functional group is attached;
- a carbon skeleton is a carbon atom, other than a carbon atom of a carboxyl group,
or a chain of carbon atoms bound to each other, a carbon skeleton is considered to
be terminated by every bond to an element other than carbon or to a carbon atom of
a carboxyl group;
- when the molecule contains several functional groups, only functional groups linked
to the same carbon skeleton as the one first determined are considered;
- a carbon sekeleton is considered to be saturated if it does not contain carbon
atoms bound to each other by multiple bonds;
- a carbon skeleton is considered to be unsaturated if it contains carbon atoms bound
to each other by multiple bonds, which includes a six-membered aromatic ring.

When classifying in this subclass, classification is also made in group B01D 15/08 insofar as subject matter of general interest relating to chromatography is concerned.

When a process is classified in a process group, combination sets are used to indicate the product of the process. A combination set consists of a process group, followed by and linked to the group of the product. The products are selected from the corresponding product groups.

WARNING

The following IPC groups are not used in the CPC scheme. Subject matter covered by these groups is classified in the following CPC groups:

C07C 27/02 covered by C07C 29/00, C07C 51/00
C07C 47/042, C07C 47/045, C07C 47/048, C07C 47/052, C07C 47/055, C07C 47/058 covered by C07C 47/04
C07C 47/07, C07C 47/09 covered by C07C 47/06
C07C 53/04 covered by C07C 53/02
C07C 57/045, C07C 57/05, C07C 57/055, C07C 57/065, C07C 57/07, C07C 57/075 covered by C07C 57/04
C07C 69/025, C07C 69/03, C07C 69/035 covered by C07C 69/003 to C07C 69/017 and C07C 69/02 C07C 69/347, C07C 69/353 covered by C07C 69/003 to C07C 69/017 and C07C 69/34 C07C 69/527 covered by C07C 69/003 to C07C 69/017 and C07C 69/52 C07C 69/767, C07C 69/773 covered by C07C 69/003 to C07C 69/017 and C07C 69/76 C07C 69/83 covered by C07C 69/003 to C07C 69/017 and C07C 69/82

Guide heading: **Hydrocarbons** (derivatives of cyclohexane or of a cyclohexene { or of cyclohexadiene }, having a side-chain containing an acyclic unsatureted part of at least four carbon atoms, this part being directly attached to the cyclohexane or cyclohexene { or cyclohexadiene } rings C07C 403/00; preparation of macromolecular compounds C08 ; production or separation from undefined hydrocarbon mixtures such as petroleum oil C10G ; natural gas, synthetic natural gas, liquefied petroleum gas C10L 3/00; electrolytic or electrophoretic processes C25B)

C07C 1/00 **Preparation of hydrocarbons from one or more compounds, none of them being a hydrocarbon**

C07C 1/02 . from oxides of a carbon (preparation of liquid hydrocarbon mixtures of undefined compostion C10G 2/00; of synthetic natural gas C10L 3/06)

C07C 1/04 . . from carbon monoxide with hydrogen

C07C 1/0405 . . . {Apparatus }

C07C 1/041 . . . . {Reactors }

C07C 1/0415 . . . . . {with moving catalysts }

C07C 1/042 . . . . {Temperature controlling devices; Heat exchangers }

C07C 1/0425 . . . {Catalysts; their physical properties }

C07C 1/043 . . . . {characterised by the composition }

C07C 1/0435 . . . . . {containing a metal of group 8 or a compound thereof }

C07C 1/044 . . . . . {containing iron }

C07C 1/0445 . . . . {Preparation; Activation }

C07C 1/045 . . . . {Regeneration }

C07C 1/0455 . . . {Reaction conditions }

C07C 1/046 . . . . {Numerical values of parameters (only to be used if no other subgroup of C07C 1/04 is used) }

C07C 1/0465 . . . . {concerning fluidisation }

C07C 1/047 . . . . {Processes in which one or more parameters are changed during the process; Starting-up of the process }

C07C 1/0475 . . . . {Regulating }

C07C 1/048 . . . . {Temperature controlling measures }

C07C 1/0485 . . . {Set-up of reactors or accessories; Multi-step processes }

C07C 1/049 . . . . {Coupling of the reaction and regeneration of the catalyst }

C07C 1/0495 . . . {Non-catalytic processes; Catalytic processes in which there is also another way of activation, e.g. radiation }

C07C 1/06 . . . in the presence of organic compounds, e.g. hydrocarbons { (multi-step processes in which the feed to a subsequent reaction zone comprises at least a part of the reaction-product of a previous reaction zone C07C 1/0485) }

C07C 1/063 . . . . {the organic compound being the catalyst or a part of the catalyst system }

C07C 1/066 . . . . . {used for dissolving, suspending or transporting the catalyst }

C07C 1/08 . . . Isosyntheses

C07C 1/10 . . from carbon monoxide with water vapour

C07C 1/12 . . from carbon dioxide with hydrogen

C07C 1/20 . starting from organic compounds containing only oxygen atoms as heteroatoms

C07C 1/207 . . from carbonyl compounds

C07C 1/2072 . . . {by condensation (C07C 2/86 takes precedence) }

C07C 1/2074 . . . . {of only one compound }

C07C 1/2076 . . . { by a transformation in which at least one -C(=O)- moiety is eliminated }

C07C 1/2078 . . . { by a transformation in which at least one -C(=O)-O- moiety is eliminated }

C07C 1/213 . . . by splitting of esters
C07C 1/22 . . by reduction
C07C 1/24 . . by elimination of water
C07C 1/247 . . by splitting of cyclic ethers

C07C 1/26 . starting from organic compounds containing only halogen atoms as hetero-atoms
C07C 1/28 . . by ring closure
C07C 1/30 . . by splitting-off the elements of hydrogen halide from a single molecule

C07C 1/32 . starting from compounds containing hetero-atoms other than or in addition to oxygen or halogen
C07C 1/321 . . {the hetero-atom being a non-metal atom }
C07C 1/322 . . . {the hetero-atom being a sulfur atom }
C07C 1/323 . . . {the hetero-atom being a nitrogen atom }
C07C 1/324 . . . {the hetero-atom being a phosphorus atom (C07C 1/34 takes precedence) }
C07C 1/325 . . {the hetero-atom being a metal atom }
C07C 1/326 . . . {the hetero-atom being a magnesium atom }
C07C 1/327 . . . {the hetero-atom being an aluminium atom (C07C 2/88 takes precedence) }
C07C 1/328 . . . {the hetero-atom being an alkali metal atom }
C07C 1/34 . . reacting phosphines with aldehydes or ketones, e.g. Wittig reaction

C07C 1/36 . by splitting of esters (C07C 1/213, C07C 1/30 take precedence)

C07C 2/00 **Preparation of hydrocarbons from hydrocarbons containing a smaller number of carbon atoms** (redistribution reactions involving splitting C07C 6/00)

C07C 2/02 . by addition between unsaturated hydrocarbons
C07C 2/04 . . by oligomerisation of well-defined unsaturated hydrocarbons without ring formation
C07C 2/06 . . . of alkenes, i.e. acyclic hydrocarbons having only one carbon-to-carbon double bond
C07C 2/08 . . . . Catalytic processes
C07C 2/10 . . . . . with metal oxides
C07C 2/12 . . . . . with crystalline alumino-silicates {or with catalysts comprising } molecular sieves
C07C 2/14 . . . . . with inorganic acids
with salts or anhydrides of acids
C07C 2/16 . . . . . Acids of sulfur
Salts thereof
Sulfur oxides
C07C 2/18 . . . . . Acids of phosphorus
Salts thereof
Phosphorus oxides
C07C 2/20 . . . . . Acids of halogen
salts thereof {Complexes thereof with organic compounds }
C07C 2/22 . . . . . Metal halides
Complexes thereof with organic compounds

C07C 2/24 . . . . . with metals

C07C 2/26 . . . . . with hydrides or organic compounds (C07C 2/20 takes precedence)

C07C 2/28 . . . . . with ion-exchange resins

C07C 2/30 . . . . . containing metal-to-carbon bond
Metal hydrides

C07C 2/32 . . . . . as complexes, e.g. acetyl-acetonates {complexes of salts of acids of halogen C07C 2/20 }

C07C 2/34 . . . . . Metal-hydrocarbon complexes

C07C 2/36 . . . . . as phosphines, arsines, stilbines or bismuthines

C07C 2/38 . . . of dienes or alkynes

C07C 2/40 . . . . of conjugated dienes

C07C 2/403 . . . . . {Catalytic processes }

C07C 2/406 . . . . . {with hydrides or organic compounds }

C07C 2/42 . . homo- or co-oligomerisation with ring formation, not being a Diels-Alder conversion

C07C 2/44 . . . of conjugated dienes only

C07C 2/46 . . . . Catalytic processes

C07C 2/465 . . . . . {with hydrides or organic compounds }

C07C 2/48 . . . of only hydrocarbons containing a carbon-to-carbon triple bond

C07C 2/50 . . Diels-Alder conversion

C07C 2/52 . . . Catalytic processes

C07C 2/54 . by addition of unsaturated hydrocarbons to saturated hydrocarbons or to hydrocarbons containing a six-membered aromatic ring with no unsaturation outside the aromatic ring

C07C 2/56 . . Addition to acyclic hydrocarbons

C07C 2/58 . . . Catalytic processes

C07C 2/60 . . . . with halides

C07C 2/62 . . . . with acids

C07C 2/64 . . Addition to a carbon atom of a six-membered aromatic ring

C07C 2/66 . . . Catalytic processes

C07C 2/68 . . . . with halides

C07C 2/70 . . . . with acids

C07C 2/72 . . Addition to a non-aromatic carbon atom of hydrocarbons containing a six-membered aromatic ring

C07C 2/74 . by addition with simultaneous hydrogenation

C07C 2/76 . by condensation of hydrocarbons with partial elimination of hydrogen

C07C 2/78 . . Processes with partial combustion

C07C 2/80 . . Processes with the aid of electrical means

C07C 2/82 . . Oxidative coupling

C07C 2/84 . . . catalytic

C07C 2/86 . by condensation between a hydrocarbon and a non-hydrocarbon

C07C 2/861 . . {the non-hydrocarbon contains only halogen as hetero-atoms }

C07C 2/862 . . {the non-hydrocarbon contains only oxygen as hetero-atoms }
C07C 2/864 . . . {the non-hydrocarbon is an alcohol }
C07C 2/865 . . . {the non-hydrocarbon is an ether }
C07C 2/867 . . . {the non-hydrocarbon is an aldehyde or a ketone }
C07C 2/868 . . {the non-hydrocarbon contains sulfur as hetero-atom }
C07C 2/88 . . { Growth and elimination reactions (preparation of metallo-organic compounds C07F) }

C07C 4/00 **Preparation of hydrocarbons from hydrocarbons containing a larger number of carbon atoms** (redistribution reactions involving splitting C07C 6/00; cracking hydrocarbon oils C10G)

C07C 4/02 . by cracking a single hydrocarbon or a mixture of individually defined hydrocarbons or a normally gaseous hydrocarbon fraction
C07C 4/025 . . {Oxidative cracking, autothermal cracking or cracking by partial combustion }
C07C 4/04 . . Thermal processes {C07C 4/025 takes precedence }
C07C 4/06 . . Catalytic processes {C07C 4/025 takes precedence }

C07C 4/08 . by splitting-off an aliphatic or cycloaliphatic part from the molecule
C07C 4/10 . . from acyclic hydrocarbons
C07C 4/12 . . from hydrocarbons containing a six-membered aromatic ring, e.g. propyltoluene to vinyltoluene
C07C 4/14 . . . splitting taking place at an aromatic-aliphatic bond
C07C 4/16 . . . . Thermal processes
C07C 4/18 . . . . Catalytic processes
C07C 4/20 . . . . Hydrogen being formed in situ, e.g. from steam

C07C 4/22 . by depolymerisation to the original monomer, e.g. dicyclopentadiene to cyclopentadiene

C07C 4/24 . by splitting polyarylsubstituted aliphatic compounds at an aliphatic-aliphatic bond, e.g. 1,4-diphenylbutane to styrene

C07C 4/26 . by splitting polyaryl compounds at a bond between uncondensed six-membered aromatic rings, e.g. biphenyl to benzene

C07C 5/00 **Preparation of hydrocarbons from hydrocarbons containing the same number of carbon atoms**

C07C 5/02 . by hydrogenation (simultaneous hydrogenation and dehydrogenation C07C 5/52)
C07C 5/03 . . of non-aromatic carbon-to-carbon double bonds
C07C 5/05 . . . Partial hydrogenation
C07C 5/08 . . of carbon-to-carbon triple bonds
C07C 5/09 . . . to carbon-to-carbon double bonds
C07C 5/10 . . of aromatic six-membered rings
C07C 5/11 . . . Partial hydrogenation

C07C 5/13 .. with simultaneous isomerisation

C07C 5/22 . by isomerisation (with simultaeous hydrogenation C07C 5/13; with simultaneous dehydrogenation C07C 5/373)

C07C 5/2206 .. {Catalytic processes not covered by C07C 5/23 to C07C 5/31 }

C07C 5/2213 ... {with metal oxides }

C07C 5/222 ... {with crystalline alumino-silicates, e.g. molecular sieves }

C07C 5/2226 ... {with inorganic acids; with salt or anhydrides of acids }

C07C 5/2233 .... {Acids of sulfur; Salts thereof; Sulfur oxides }

C07C 5/224 .... {Acids of phosphorus; Salts thereof; Phosphorus oxides }

C07C 5/2246 .... {Acids of halogen; Salts thereof }

C07C 5/2253 ..... {Metal halides; Complexes thereof with organic compounds }

C07C 5/226 ... {with metals }

C07C 5/2266 ... {with hydrides or organic compounds (C07C 5/2246 takes precedence) }

C07C 5/2273 .... {with ion-exchange resins }

C07C 5/228 .... {containing metal-to-carbon bond; Metal hydrides }

C07C 5/2286 .... {containing complexes, e.g. acetyl-acetonates (complexes of salts of acids of halogen C07C 5/2246) }

C07C 5/2293 .... {containing phosphines, arsines, stibines, or bismuthines }

C07C 5/23 .. Rearrangement of carbon-to-carbon unsaturated bonds

C07C 5/25 ... Migration of carbon-to-carbon double bonds

C07C 5/2506 .... {Catalytic processes }

C07C 5/2512 ..... {with metal oxides }

C07C 5/2518 ..... {with crystalline alumino-silicates, e.g. molecular sieves }

C07C 5/2525 ..... {with inorganic acids; with salts or anhydrides of acids }

C07C 5/2531 ..... {Acids of sulfur; Salts thereof; Sulfur oxides }

C07C 5/2537 ..... {Acids of phosphorus; Salts thereof; Phosphorus oxides }

C07C 5/2543 ..... {Acids of halogen; Salts thereof }

C07C 5/255 ..... {Metal halides; Complexes thereof with organic compounds }

C07C 5/2556 ..... {with metals }

C07C 5/2562 ..... {with hydrides or organic compounds (C07C 5/2543 takes precedence) }

C07C 5/2568 ..... {with ion-exchange resins }

C07C 5/2575 ..... {containing metal-to-carbon bond; Metal hydrides }

C07C 5/2581 ..... {containing complexes e.g. acetyl-acetonates (complexes of salts of acids of halogen C07C 5/2543) }

C07C 5/2587 ..... {Metal-hydrocarbon complexes }

C07C 5/2593 ..... {containing phosphines, arsines, stibines or bismuthines }

C07C 5/27 .. Rearrangement of carbon atoms in the hydrocarbon skeleton

C07C 5/2702 ... {Catalytic processes not covered by C07C 5/2732 to C07C 5/31; Catalytic processes covered by both C07C 5/2732 and C07C 5/277 simultaneously }

C07C 5/2705 .... {with metal oxides }

C07C 5/2708 .... {with crystalline alumino-silicates, e.g. molecular sieves }

C07C 5/271 .... {with inorganic acids; with salts or anhydrides of acids }

C07C 5/2713 ..... {Acids of sulfur; Salts thereof; Sulfur oxides }
C07C 5/2716 ..... {Acids of phosphorus; Salts thereof; Phosphorus oxides }
C07C 5/2718 ..... {Acids of halogen; Salts thereof; complexes thereof with organic compounds }
C07C 5/2721 ..... {Metal halides; Complexes thereof with organic compounds }
C07C 5/2724 .... {with metals }
C07C 5/2727 .... {with hydrides or organic compounds (C07C 5/2718 takes precedence) }
C07C 5/2729 ... {Changing the branching point of an open chain or the point of substitution on a ring }
C07C 5/2732 .... {Catalytic processes }
C07C 5/2735 ..... {with metal oxides }
C07C 5/2737 ..... {with crystalline alumino-silicates, e.g. molecular sieves }
C07C 5/274 ..... {with inorganic acids; with salts or anhydrides of acids }
C07C 5/2743 ..... {Acids of sulfur; Salts thereof; Sulfur oxides }
C07C 5/2745 ..... {Acids of phosphorus; Salts thereof; Phosphorus acids }
C07C 5/2748 ..... {Acids of halogen; Salts thereof }
C07C 5/2751 ..... {Metal halides; Complexes thereof with organic compounds }
C07C 5/2754 ..... {with metals }
C07C 5/2756 ..... {with hydrides or organic compounds (C07C 5/2748 takes precedence) }
C07C 5/2759 ..... {containing metal-to-carbon bond; Metal hydrides }
C07C 5/2762 ..... {containing complexes, e.g. acetyl-acetonates (complexes of salts of acids of halogen C07C 5/2748) }
C07C 5/2764 ..... {Metal-hydrocarbon complexes }
C07C 5/2767 ... {Changing the number of side-chains }
C07C 5/277 .... {Catalytic processes }
C07C 5/2772 ..... {with metal oxides }
C07C 5/2775 ..... {with crystalline alumino-silicates, e.g. molecular sieves }
C07C 5/2778 ..... {with inorganic acids; with salts or anhydrides of acids }
C07C 5/2781 ..... {Acids of sulfur; Salts thereof; Sulfur oxides }
C07C 5/2783 ..... {Acids of phosphorus; Salts thereof; Phosphorus oxides }
C07C 5/2786 ..... {Acids of halogen; Salts thereof }
C07C 5/2789 ..... {Metal halides; Complexes thereof with organic compounds }
C07C 5/2791 ..... {with metals }
C07C 5/2794 ..... {with hydrides or organic compounds (C07C 5/2786 takes precedence) }
C07C 5/2797 ..... {with ion-exchange resins }
C07C 5/29 ... changing the number of carbon atoms in a ring while maintaining the number of rings
C07C 5/31 ... changing the number of rings

C07C 5/32 . by dehydrogenation with formation of free hydrogen
C07C 5/321 .. {Catalytic processes }
C07C 5/322 ... {with metal oxides or metal sulfides }
C07C 5/324 ... {with metals }

C07C 5/325 .... {of the platinum group }
C07C 5/327 .. Formation of non-aromatic carbon-to-carbon double bonds only
C07C 5/333 ... Catalytic processes
C07C 5/3332 .... {with metal oxides or metal sulfides }
C07C 5/3335 .... {with metals }
C07C 5/3337 ..... {of the platinum group }
C07C 5/35 .. Formation of carbon-to-carbon triple bonds only
C07C 5/367 .. Formation of an aromatic six-membered ring from an existing six-membered ring, e.g. dehydrogenation of ethylcyclohexane to ethylbenzene
C07C 5/373 .. with simultaneous isomerisation
C07C 5/387 ... of cyclic compounds containing non six-membered ring to compounds containing a six-membered aromatic ring
C07C 5/393 ... with cyclisation to an aromatic six-membered ring, e.g. dehydrogenation of n-hexane to benzene
C07C 5/41 .... Catalytic processes
C07C 5/412 ..... {with metal oxides or metal sulfides }
C07C 5/415 ..... {with metals }
C07C 5/417 ..... {of the platinum group }

C07C 5/42 . by dehydrogenation with a hydrogen acceptor

NOTE

The catalyst is considered as forming part of the acceptor system in case of simultaneous catalyst reduction.

The acceptor system is classified according to the supplying substances in case of in situ formation of the acceptor system or of in situ regeneration of the reduced acceptor system.

Compounds added for binding the reduced acceptor system are not considered as belonging to the acceptor system.

C07C 5/44 .. with halogen or a halogen-containing compound as an acceptor
C07C 5/46 .. with sulfur or a sulfur-containing compound as an acceptor
C07C 5/48 .. with oxygen as an acceptor
C07C 5/50 .. with an organic compound as an acceptor
C07C 5/52 ... with a hydrocarbon as an acceptor, e.g. hydrocarbon disproportionation, i.e. 2CnHp -> CnHp+q + CnHp-q
C07C 5/54 .. with an acceptor system containing at least two compounds provided for in more than one of the sub-groups C07C 5/44 to C07C 5/50
C07C 5/56 ... containing only oxygen and either halogens or halogen-containing compounds

C07C 6/00 Preparation of hydrocarbons from hydrocarbons containing a different number of carbon atoms by redistribution reactions

C07C 6/02 . Metathesis reactions at an unsaturated carbon-to-carbon bond
C07C 6/04 .. at a carbon-to-carbon double bond

C07C 6/06 . . . at a cyclic carbon-to-carbon double bond

C07C 6/08 . by conversion at a saturated carbon-to-carbon bond
C07C 6/10 . . in hydrocarbons containing no six-membered aromatic rings
C07C 6/12 . . of exclusively hydrocarbons containing a six-membered aromatic ring
C07C 6/123 . . . {of only one hydrocarbon }
C07C 6/126 . . . {of more than one hydrocarbon }

C07C 7/00 **Purification**
Separation
Use of additives (working-up undefined gaseous mixtures obtained by cracking hydrocarbon oils C10G 70/00)

C07C 7/005 . {Processes comprising at least two steps in series }

C07C 7/04 . by distillation
C07C 7/05 . . with the aid of auxiliary compounds
C07C 7/06 . . . by azeotropic distillation
C07C 7/08 . . . by extractive distillation

C07C 7/09 . by fractional condensation

C07C 7/10 . by extraction, i.e. purification or separation of liquid hydrocarbons with the aid of liquids

C07C 7/11 . by absorption, i.e. purification or separation of gaseous hydrocarbons with the aid of liquids

C07C 7/12 . by adsorption, i.e. purification or separation of hydrocarbons with the aid of solids, e.g. with ion-exchangers
C07C 7/13 . . by molecular-sieve technique

C07C 7/135 . by gas-chromatography

C07C 7/14 . by crystallisation
Purification or separation of the crystals

C07C 7/144 . using membranes, e.g. selective permeation

C07C 7/148 . by treatment giving rise to a chemical modification of at least one compound

NOTE

In the following sub-groups contact masses and catalysts are disregarded for classification purposes

C07C 7/14808 . . {with non-metals as element (hydrogenation C07C 7/163) }
C07C 7/14816 . . . {oxygen; ozone }
C07C 7/14825 . . . {halogens }
C07C 7/14833 . . {with metals or their inorganic compounds }

C07C 7/14841 . . . {metals }
C07C 7/1485 . . . {oxides; hydroxides; salts (C07C 7/156 takes precedence) }
C07C 7/14858 . . { with inorganic compounds not provided for before (acids, sulfur oxides C07C 7/17) }
C07C 7/14866 . . . {water (hydrate formation C07C 7/152) }
C07C 7/14875 . . {with organic compounds (organo-metallic compounds C07C 7/173) }
C07C 7/14883 . . . {hydrocarbons }
C07C 7/14891 . . . {alcohols }
C07C 7/152 . . by forming adducts or complexes
C07C 7/156 . . . with solutions of copper salts
C07C 7/163 . . by hydrogenation
C07C 7/167 . . . for removal of compounds containing a triple carbon-to-carbon bond
C07C 7/17 . . with acids or sulfur oxides
C07C 7/171 . . . Sulfuric acid or oleum
C07C 7/173 . . with the aid of organo-metallic compounds
C07C 7/177 . . by selective oligomerisation or polymerisation of at least one compound of the mixture

C07C 7/20 . use of additives, e.g. for stabilisation

C07C 9/00 Aliphatic saturated hydrocarbons

C07C 9/02 . with one to four carbon atoms (liquefied petroleum gas C10L 3/12)
C07C 9/04 . . Methane (production by treatment of sewage C02F 11/04; natural gas, synthetic natural gas C10L 3/06)
C07C 9/06 . . Ethane
C07C 9/08 . . Propane
C07C 9/10 . . with four carbon atoms
C07C 9/12 . . . Iso-butane

C07C 9/14 . with five to fifteen carbon atoms
C07C 9/15 . . Straight-chain hydrocarbons
C07C 9/16 . . Branched-chain hydrocarbons
C07C 9/18 . . . with five carbon atoms
C07C 9/21 . . . 2, 2, 4-Trimethylpentane

C07C 9/22 . with more than fifteen carbon atoms

C07C 11/00 Aliphatic unsaturated hydrocarbons

C07C 11/02 . Alkenes
C07C 11/04 . . Ethylene
C07C 11/06 . . Propene
C07C 11/08 . . with four carbon atoms

C07C 11/09 . . . Isobutene
C07C 11/10 . . with five carbon atoms
C07C 11/107 . . with six carbon atoms
C07C 11/113 . . . Methylpentenes

C07C 11/12 . Alkadienes
C07C 11/14 . . Allene
C07C 11/16 . . with four carbon atoms
C07C 11/167 . . . 1, 3-Butadiene
C07C 11/173 . . with five carbon atoms
C07C 11/18 . . . Isoprene
C07C 11/20 . . . 1, 3-Pentadiene

C07C 11/21 . Alkatrienes
Alkatetraenes
Other alkapolyenes

C07C 11/22 . containing carbon-to-carbon triple bonds
C07C 11/24 . . Acetylene (production of acetylene gas by wet methods C10H)

C07C 11/28 . containing carbon-to-carbon double bonds and carbon-to-carbon triple bonds
C07C 11/30 . . Butenyne

C07C 13/00 Cyclic hydrocarbons containing rings other than, or in addition to, six-membered aromatic rings

C07C 13/02 . Monocyclic hydrocarbons or acyclic hydrocarbon derivatives thereof
C07C 13/04 . . with a three-membered ring
C07C 13/06 . . with a four-membered ring
C07C 13/08 . . with a five-membered ring
C07C 13/10 . . . with a cyclopentane ring
C07C 13/11 . . . . substituted by unsaturated hydrocarbon groups
C07C 13/12 . . . with a cyclopentene ring
C07C 13/15 . . . with a cyclopentadiene ring
C07C 13/16 . . with a six-membered ring
C07C 13/18 . . . with a cyclohexane ring
C07C 13/19 . . . . substituted by unsaturated hydrocarbon groups
C07C 13/20 . . . with a cyclohexene ring
C07C 13/21 . . . . Menthadienes
C07C 13/23 . . . with a cyclohexadiene ring
C07C 13/24 . . with a seven-membered ring
C07C 13/26 . . with an eight-membered ring
C07C 13/263 . . . with a cyclo-octene or cyclo-octadiene ring
C07C 13/267 . . . with a cyclo-octatriene or cyclo-octatetraene ring

C07C 13/271 .. with a nine- to ten- membered ring
C07C 13/273 .. with a twelve-membered ring
C07C 13/275 ... the twelve-membered ring being unsaturated
C07C 13/277 .... with a cyclododecatriene ring

C07C 13/28 . Polycyclic hydrocarbons or acyclic hydrocarbon derivatives thereof

NOTE

Ring systems consisting only of condensed six-membered ring with maximum number of non-cumulative double bonds are classified in group C07C 15/00.

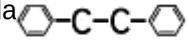
C07C 13/32 .. with condensed rings
C07C 13/34 ... with a bicyclo ring system containing four carbon atoms
C07C 13/36 ... with a bicyclo ring system containing five carbon atoms
C07C 13/38 ... with a bicyclo ring system containing six carbon atoms
C07C 13/39 ... with a bicyclo ring system containing seven carbon atoms
C07C 13/40 .... with a bicycloheptane ring structure
C07C 13/42 .... with a bicycloheptene ring structure
C07C 13/43 ..... substituted by unsaturated acyclic hydrocarbon
C07C 13/44 ... with a bicyclo ring system containing eight carbon atoms
C07C 13/45 ... with a bicyclo ring system containing nine carbon atoms
C07C 13/465 .... Indenes
Completely or partially hydrogenated indenes
C07C 13/47 ... with a bicyclo ring system containing ten carbon atoms
C07C 13/48 .... Completely or partially hydrogenated naphthalenes
C07C 13/50 ..... Decahydronaphthalenes
C07C 13/52 .... Azulenes
Completely or partially hydrogenated azulenes
C07C 13/54 ... with three condensed rings
C07C 13/547 .... at least one ring not being six-membered, the other rings being at the most six-membered
C07C 13/553 ..... with an indacene or hydrogenated indacene ring system
C07C 13/567 ..... with a fluorene or hydrogenated fluorene ring system
C07C 13/573 .... with three six-membered rings
C07C 13/58 ..... Completely or partially hydrogenated anthracenes
C07C 13/60 ..... Completely or partially hydrogenated phenanthrenes
C07C 13/605 .... with a bridged ring system
C07C 13/61 ..... with a bridged indene ring, e.g. dicyclopentadiene
C07C 13/615 ..... with an adamantane ring
C07C 13/62 ... with more than three condensed rings
C07C 13/64 .... with a bridged ring system
C07C 13/66 .... the condensed ring system contains only four rings
C07C 13/68 ..... with a bridged ring system
C07C 13/70 ... with a condensed ring system consisting of at least two, mutually uncondensed

aromatic ring systems, linked by an annular structure formed by carbon chains on non-adjacent positions of the aromatic ring, e.g. cyclophanes

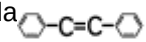
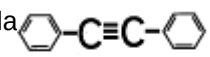
C07C 13/72 . . . Spiro hydrocarbons

C07C 15/00 Cyclic hydrocarbons containing only six-membered aromatic rings as cyclic parts

C07C 15/02 . Monocyclic hydrocarbons
C07C 15/04 . . Benzene
C07C 15/06 . . toluene
C07C 15/067 . . C8H10 hydrocarbons
C07C 15/073 . . . Ethylbenzene
C07C 15/08 . . . Xylenes
C07C 15/085 . . Isopropylbenzene
C07C 15/107 . . having saturated side-chain containing at least six carbon atoms, e.g. detergent alkylates
C07C 15/113 . . . having at least two saturated side-chains, each containing at least six carbon atoms

C07C 15/12 . Polycyclic non-condensed hydrocarbons
C07C 15/14 . . all phenyl groups being directly linked
C07C 15/16 . . containing at least two phenyl groups linked by one single acyclic carbon atom
C07C 15/18 . . containing at least one group with formula 

C07C 15/20 . Polycyclic condensed hydrocarbons
C07C 15/24 . . containing two rings
C07C 15/27 . . containing three rings
C07C 15/28 . . . Anthracenes
C07C 15/30 . . . Phenanthrenes
C07C 15/38 . . containing four rings

C07C 15/40 . substituted by unsaturated carbon radicals
C07C 15/42 . . Monocyclic
C07C 15/44 . . . the hydrocarbon substituent containing a carbon-to-carbon double bond
C07C 15/46 . . . . Styrene
Ring-alkylated styrenes
C07C 15/48 . . . the hydrocarbon substituent containing a carbon-to-carbon triple bond
C07C 15/50 . . Polycyclic non-condensed
C07C 15/52 . . . containing a group with formula 
C07C 15/54 . . . containing a group with formula 
C07C 15/56 . . Polycyclic condensed
C07C 15/58 . . . containing two rings
C07C 15/60 . . . containing three rings
C07C 15/62 . . . containing four rings

Guide heading: **Compounds containing carbon and halogens with or without hydrogen** (derivatives of cyclohexane or of a cyclohexene having an unsaturated side chain with at least four carbon atoms C07C 403/00)

C07C 17/00 **Preparation of halogenated hydrocarbons**

C07C 17/007 . from carbon or from carbides and halogens

C07C 17/013 . by addition of halogens
C07C 17/02 . . to unsaturated hydrocarbons
C07C 17/04 . . to unsaturated halogenated hydrocarbons
C07C 17/06 . . combined with replacement of hydrogen atoms by halogens

C07C 17/07 . by addition of hydrogen halides
C07C 17/08 . . to unsaturated hydrocarbons
C07C 17/087 . . to unsaturated halogenated hydrocarbons

C07C 17/093 . by replacement by halogens
C07C 17/10 . . of hydrogen atoms (combined with addition of halogens to unsaturated hydrocarbons C07C 17/06)
C07C 17/12 . . . in the ring of aromatic compounds
C07C 17/14 . . . in the side-chain of aromatic compounds
C07C 17/15 . . with oxygen as auxiliary reagent, e.g. oxychlorination
C07C 17/152 . . . of hydrocarbons
C07C 17/154 . . . . of saturated hydrocarbons
C07C 17/156 . . . . of unsaturated hydrocarbons
C07C 17/158 . . . of halogenated hydrocarbons
C07C 17/16 . . of hydroxyl groups
C07C 17/18 . . of oxygen atoms of carbonyl groups
C07C 17/20 . . of halogen atoms by other halogen atoms
C07C 17/202 . . . {two or more compounds being involved in the reaction }
C07C 17/204 . . . . {the other compound being a halogen }
C07C 17/206 . . . . {the other compound being HX }
C07C 17/208 . . . . {the other compound being MX }
C07C 17/21 . . . with simultaneous increase of the number of halogen atoms

C07C 17/23 . by dehalogenation

C07C 17/25 . by splitting-off hydrogen halides from halogenated hydrocarbons

C07C 17/26 . by reactions involving an increase in the number of carbon atoms in the skeleton
C07C 17/263 . . by condensation reactions
C07C 17/2632 . . . { involving an organo-magnesium compound, e.g. Grignard synthesis }
C07C 17/2635 . . . { involving a phosphorus compound, e.g. Wittig synthesis }

C07C 17/2637 . . . { between a compound containing only oxygen and possibly halogen as hetero-atoms and a halogenated hydrocarbon }
C07C 17/266 . . . of hydrocarbons and halogenated hydrocarbons
C07C 17/269 . . . of only halogenated hydrocarbons
C07C 17/272 . . by addition reactions
C07C 17/275 . . . of hydrocarbons and halogenated hydrocarbons
C07C 17/278 . . . of only halogenated hydrocarbons
C07C 17/281 . . . . of only one compound
C07C 17/30 . . by a Diels-Alder synthesis
C07C 17/32 . . by introduction of halogenated alkyl groups into ring compounds

C07C 17/35 . by reactions not affecting the number of carbon or of halogen atoms in the reaction
C07C 17/354 . . by hydrogenation
C07C 17/357 . . by dehydrogenation
C07C 17/358 . . by isomerisation

C07C 17/361 . by reactions involving a decrease in the number of carbon atoms
C07C 17/363 . . by elimination of carboxyl groups
C07C 17/367 . . by depolymerisation

C07C 17/37 . by disproportionation of halogenated hydrocarbons

C07C 17/38 . Separation
Purification
Stabilisation
Use of additives
C07C 17/383 . . by distillation
C07C 17/386 . . . with auxiliary compounds
C07C 17/389 . . by adsorption on solids
C07C 17/392 . . by crystallisation
Purification or separation of the crystals
C07C 17/395 . . by treatment giving rise to a chemical modification of at least one compound
C07C 17/42 . . Use of additives, e.g. for stabilisation

C07C 19/00 Acyclic saturated compounds containing halogen atoms

C07C 19/01 . containing chlorine
C07C 19/03 . . Chloromethanes
C07C 19/04 . . . Chloroform
C07C 19/041 . . . Carbon tetrachloride
C07C 19/043 . . Chloroethanes
C07C 19/045 . . . Dichloroethanes
C07C 19/05 . . . Trichloroethanes
C07C 19/055 . . . Tetrachloroethanes

C07C 19/07 . containing iodine

C07C 19/075 . containing bromine

C07C 19/08 . containing fluorine
C07C 19/10 . . and chlorine
C07C 19/12 . . . having two carbon atoms
C07C 19/14 . . and bromine
C07C 19/16 . . and iodine

C07C 21/00 Acyclic unsaturated compounds containing halogen atoms

C07C 21/02 . containing carbon-to-carbon double bonds
C07C 21/04 . . Chloro-alkenes
C07C 21/06 . . . Vinyl chloride
C07C 21/067 . . . Allyl chloride
Methallyl chloride
C07C 21/073 . . . Dichloro-alkenes
C07C 21/08 . . . . Vinylidene chloride
C07C 21/09 . . . . Dichloro-butenes
C07C 21/10 . . . Trichloro-ethylene
C07C 21/12 . . . Tetrachloro-ethylene
C07C 21/14 . . containing bromine
C07C 21/16 . . . Crotyl bromide
C07C 21/17 . . containing iodine
C07C 21/18 . . containing fluorine
C07C 21/185 . . . tetrafluorethene
C07C 21/19 . . Halogenated dienes
C07C 21/20 . . . Halogenated butadienes
C07C 21/21 . . . . Chloroprene
C07C 21/215 . . Halogenated polyenes with more than two carbon-to-carbon double bonds

C07C 21/22 . containing carbon-to-carbon triple bonds

C07C 22/00 Cyclic compounds containing halogen atoms bound to an acyclic carbon atom

C07C 22/02 . having unsaturation in the rings
C07C 22/04 . . containing six-membered aromatic rings
C07C 22/06 . . . Trichloromethylbenzene
C07C 22/08 . . . containing fluorine

C07C 23/00 Compounds containing at least one halogen atom bound to a ring other than a six-membered aromatic ring

C07C 23/02 . Monocyclic halogenated hydrocarbons
C07C 23/04 . . with a three-membered ring
C07C 23/06 . . with a four-membered ring
C07C 23/08 . . with a five-membered ring
C07C 23/10 . . with a six-membered ring
C07C 23/12 . . . Hexachlorocyclohexanes
C07C 23/14 . . with a seven-membered ring
C07C 23/16 . . with an eight-membered ring

C07C 23/18 . Polycyclic halogenated hydrocarbons
C07C 23/20 . . with condensed rings none of which is aromatic
C07C 23/22 . . . with a bicyclo ring system containing four carbon atoms
C07C 23/24 . . . wiht a bicyclo ring system containing five carbon atoms
C07C 23/26 . . . with a bicyclo ring system containing six carbon atoms
C07C 23/27 . . . with a bicyclo ring system contaning seven carbon atoms
C07C 23/28 . . . . Saturated bicyclo ring system
C07C 23/30 . . . . Mono-unsaturated bicyclo ring system
C07C 23/32 . . . with a bicyclo ring system containing eight carbon atoms
C07C 23/34 . . . Halogenated completely or partially hydrogenated indenes
C07C 23/36 . . . Halogenated completely or partially hydrogenated naphthalenes
C07C 23/38 . . . with three condensed rings
C07C 23/40 . . . . Halogenated completely or partially hydrogenated fluorenes
C07C 23/42 . . . . Halogenated completely or partially hydrogenated anthracenes
C07C 23/44 . . . . Halogenated completely or partially hydrogenated phenanthrenes
C07C 23/46 . . . with more than three condensed rings

C07C 25/00 Compounds containing at least one halogen atom bound to a six-membered aromatic ring

C07C 25/02 . Monocyclic aromatic halogenated hydrocarbons
C07C 25/06 . . Monochloro-benzene
C07C 25/08 . . Dichloro-benzenes
C07C 25/10 . . Trichloro-benzenes
C07C 25/12 . . Hexachloro-benzene
C07C 25/125 . . Halogenated xylenes
C07C 25/13 . . containing fluorine

C07C 25/18 . Polycyclic aromatic halogenated hydrocarbons
C07C 25/20 . . Dichloro-diphenyl-trichloro-ethane
C07C 25/22 . . with condensed rings

C07C 25/24 . Halogenated aromatic hydrocarbons with unsaturated side chains
C07C 25/28 . . Halogenated styrenes

Guide heading: **Compounds containing carbon and oxygen, with or without hydrogen or halogens** (irradiation products of cholesterol or its derivatives C07C 401/00; vitamin D derivatives, 9,10-seco cyclopenta[a]phenanthrene or analogues obtained by chemical preparation without irradiation C07C 401/00; derivatives of cyclohexane or of a cyclohexene { or of cyclohexadiene }, having a side-chain containing an acyclic unsaturated part of at least four carbon atoms, this part being directly attached to the cyclohexane or cyclohexene { or cyclohexadiene } rings C07C 403/00; prostaglandins or derivatives thereof C07C 405/00; peroxy compounds C07C 407/00, C07C 409/00)

C07C 27/00 **Processes involving the simultaneous production of more than one class of oxygen-containing compounds**

C07C 27/04 . by reduction of oxygen-containing compounds (C07C 29/14 takes precedence)
C07C 27/06 . . by hydrogenation of oxides of carbon
C07C 27/08 . . . with moving catalysts

C07C 27/10 . by oxidation of hydrocarbons
C07C 27/12 . . with oxygen
C07C 27/14 . . . wholly gaseous reactions
C07C 27/16 . . with other oxidising agents

C07C 27/18 . by addition of alkynes to aldehydes, ketones, or alkylene oxides

C07C 27/20 . by oxo-reaction
C07C 27/22 . . with the use of catalysts which are specific for this process
C07C 27/24 . . with moving catalysts

C07C 27/26 . Purification
Separation
Stabilisation
C07C 27/28 . . by distillation
C07C 27/30 . . . by azeotropic distillation
C07C 27/32 . . . by extractive distillation
C07C 27/34 . . by extraction

C07C 29/00 **Preparation of compounds having hydroxy or O-metal groups bound to a carbon atom not belonging to a six-membered aromatic ring**

C07C 29/03 . by addition of hydroxy groups to unsaturated carbon-to-carbon bonds, e.g. with the aid of H2O2 (by simultaneous introduction of -OH groups and halogens C07C 29/64)
C07C 29/04 . . by hydration of carbon-to-carbon double bonds
C07C 29/05 . . . with formation of absorption products in mineral acids and their hydrolysis (characterised by the method of hydrolysis C07C 29/12)
C07C 29/06 . . . . the acid being sulfuric acid
C07C 29/08 . . . . the acid being phosphoric acid

C07C 29/09 . by hydrolysis

C07C 29/095 .. {of esters of organic acids }
C07C 29/10 .. of ethers, including cyclic ethers, e.g. oxiranes
C07C 29/103 ... {of cyclic ethers }
C07C 29/106 .... {of oxiranes }
C07C 29/12 .. of esters of mineral acids
C07C 29/124 ... of halides

C07C 29/128 . by alcoholysis
C07C 29/1285 .. {of esters of organic acids }

C07C 29/132 . by reduction of an oxygen containing functional group
C07C 29/136 .. of >C=O containing groups, e.g. -COOH
C07C 29/14 ... of a -CHO group
C07C 29/141 .... with hydrogen or hydrogen-containing gases
C07C 29/143 ... of ketones
C07C 29/145 .... with hydrogen or hydrogen-containing gases
C07C 29/147 ... of carboxylic acids or derivatives thereof
C07C 29/149 .... with hydrogen or hydrogen-containing gases

C07C 29/15 . by reduction of oxides of carbon exclusively
C07C 29/151 .. with hydrogen or hydrogen-containing gases
C07C 29/1512 ... {characterised by reaction conditions }
C07C 29/1514 .... {the solvents being characteristic }
C07C 29/1516 ... {Multisteps }
C07C 29/1518 .... {one step being the formation of initial mixture of carbon oxides and hydrogen for synthesis }
C07C 29/152 ... characterised by the reactor used
C07C 29/153 ... characterised by the catalyst used
C07C 29/154 .... containing copper, silver, gold, or compounds thereof
C07C 29/156 .... containing iron group metals, platinum group metals or compounds thereof
C07C 29/157 ..... containing platinum group metals or compounds thereof
C07C 29/158 ..... containing rhodium or compounds thereof
C07C 29/159 .. with reducing agents other than hydrogen or hydrogen-containing gases

C07C 29/16 . by oxo-reaction combined with reduction

C07C 29/17 . by hydrogenation of carbon-to-carbon double or triple bonds
C07C 29/172 .. {with the obtention of a fully saturated alcohol }
C07C 29/175 .. {with simultaneous reduction of an oxo group }
C07C 29/177 .. {with simultaneous reduction of a carboxy group }
C07C 29/19 .. in six-membered aromatic rings
C07C 29/20 ... in a non-condensed ring substituted with hydroxy groups

C07C 29/32 . increasing the number of carbon atoms by reactions without formation of -OH groups

C07C 29/34 . . by condensation involving hydroxy groups or the mineral ester groups derived therefrom, e.g. Guerbet reaction

C07C 29/36 . increasing the number of carbon atoms by reactions with formation of hydroxy groups, which may occur via intermediates being derivatives of hydroxy, e.g. O-metal

C07C 29/38 . . by reaction with aldehydes or ketones

C07C 29/40 . . . with compounds containing carbon-to-metal bonds

C07C 29/42 . . . with compounds containing triple carbon-to-carbon bonds, e.g. with metal-alkynes

C07C 29/44 . increasing the number of carbon atoms by addition reactions, i.e. reactions involving at least one carbon-to-carbon double or triple bond (C07C 29/16 takes precedence)

C07C 29/46 . . by diene-synthesis

C07C 29/48 . by oxidation reactions with formation of hydroxy groups

C07C 29/50 . . with molecular oxygen only

C07C 29/52 . . . in the presence of mineral boron compounds with, when necessary, hydrolysis of the intermediate formed

C07C 29/54 . . . starting from compounds containing carbon-to-metal bonds and followed by conversion of the -O- metal to -OH groups

C07C 29/56 . by isomerisation

C07C 29/58 . by elimination of halogen, e.g. by hydrogenolysis, splitting-off (C07C 29/124 takes precedence)

C07C 29/60 . by elimination of -OH groups, e.g. by dehydration (C07C 29/34 takes precedence)

C07C 29/62 . by introduction of halogen
by substitution of halogen atoms by other halogen atoms

C07C 29/64 . by simultaneous introduction of -OH groups and halogens

C07C 29/66 . . by addition of hypohalogenous acids, which may be formed in situ, to carbon-to-carbon unsaturated bonds

C07C 29/68 . Preparation of metal alcoholates (C07C 29/42, C07C 29/54 take precedence)

C07C 29/685 . . {by converting O-metal groups to other O-metal groups }

C07C 29/70 . . by converting hydroxy groups to O-metal groups {C07C 29/09 takes precedence }

C07C 29/705 . . . {by transalcoholysis (for the same reaction with the emphasis on alcohol preparation see C07C 29/128) }

C07C 29/72 . . by oxidation of carbon-to-metal bonds

C07C 29/74 . Separation
purification
use of additives, e.g. for stabilisation

C07C 29/76 . . by physical treatment

C07C 29/78 . . . by condensation or crystallisation

C07C 29/80 . . . by distillation

C07C 29/82 . . . . by azeotropic distillation

C07C 29/84 .... by extractive distillation
C07C 29/86 ... by liquid-liquid treatment
C07C 29/88 .. by treatment giving rise to a chemical modification of at least one compound (chemisorption C07C 29/76)
C07C 29/90 ... using hydrogen only
C07C 29/92 ... by a consecutive conversion and reconstruction
C07C 29/94 .. Use of additives, e.g. for stabilisation

C07C 31/00 Saturated compounds having hydroxy or O-metal groups bound to acyclic carbon atoms

C07C 31/02 . Monohydroxylic acyclic alcohols
C07C 31/04 .. Methanol
C07C 31/08 .. Ethanol
C07C 31/10 .. containing three carbon atoms
C07C 31/12 .. containing four carbon atoms
C07C 31/125 .. containing five to twenty-two carbon atoms

C07C 31/13 . Monohydroxylic alcohols containing saturated rings
C07C 31/133 .. Monocyclic
C07C 31/1333 ... {with a three-membered ring }
C07C 31/1336 ... {with a four-membered ring }
C07C 31/135 ... with a five or six-membered ring naphthenic alcohols
C07C 31/1355 .... {with a six-membered ring }
C07C 31/137 .. Polycyclic with condensed ring systems

C07C 31/18 . Polyhydroxylic acyclic alcohols
C07C 31/20 .. Dihydroxylic alcohols
C07C 31/202 ... { Ethylene glycol }
C07C 31/205 ... { 1,3-Propanediol; 1,2-Propanediol }
C07C 31/207 ... { 1,4-Butanediol; 1,3-Butanediol; 1,2-Butanediol; 2,3-Butanediol }
C07C 31/22 .. Trihydroxylic alcohols, e.g. glycerol
C07C 31/225 ... {Glycerol }
C07C 31/24 .. Tetrahydroxylic alcohols, e.g. pentaerythritol
C07C 31/245 ... {Pentaerythritol }
C07C 31/26 .. Hexahydroxylic alcohols

C07C 31/27 . Polyhydroxylic alcohols containing saturated rings
C07C 31/272 .. {Monocyclic }
C07C 31/274 ... {with a three to five-membered ring }
C07C 31/276 ... {with a six-membered ring }
C07C 31/278 .. {Polycyclic with condensed rings }

C07C 31/28 . Metal alcoholates (titanates, zirconates C07F 7/00)
C07C 31/30 . . Alkali metal or alkaline earth metal alcoholates
C07C 31/32 . . Aluminium alcoholates

C07C 31/34 . Halogenated alcohols
C07C 31/36 . . the halogen not being fluorine
C07C 31/38 . . containing only fluorine as halogen
C07C 31/40 . . Perhalogenated
C07C 31/42 . . Polyhydroxylic acyclic alcohols
C07C 31/44 . . Halogenated alcohols containing saturated rings

C07C 33/00 Unsaturated compounds having hydroxy or O-metal groups bound to acyclic carbon atoms

NOTE

In condensed ring systems of six-membered aromatic rings and other rings, the double bond belonging to a benzene ring is not considered as unsaturated for the non-aromatic ring condensed thereon, e.g. the 1, 2, 3, 4-tetrahydronaphtalene ring is considered to be saturated outside the aromatic ring

C07C 33/02 . Acyclic alcohols with carbon-to-carbon double bonds
C07C 33/025 . . with only one double bond
C07C 33/03 . . . in beta-position, e.g. allyl alcohol, methallyl alcohol
C07C 33/035 . . . Alkenediols

C07C 33/04 . Acyclic alcohols with carbon-to-carbon triple bonds
C07C 33/042 . . with only one triple bond
C07C 33/044 . . . Alkynediols
C07C 33/046 . . . . Butynediols
C07C 33/048 . . with double and triple bonds

C07C 33/05 . Alcohols containing rings other than six-membered aromatic rings
C07C 33/12 . . containing five-membered rings
C07C 33/14 . . containing six-membered rings
C07C 33/16 . . containing rings with more than six ring members

C07C 33/18 . Monohydroxylic alcohols containing only six-membered aromatic rings as cyclic part
C07C 33/20 . . Monocyclic
C07C 33/22 . . . Benzylalcohol
phenethyl alcohol
C07C 33/24 . . Polycyclic without condensed ring systems

C07C 33/26 . Polyhydroxylic alcohols containing only six-membered aromatic rings as cyclic part

C07C 33/28 . Alcohols containing only six-membered aromatic rings as cyclic part with unsaturation

outside the aromatic rings

C07C 33/30 . . Monocyclic

C07C 33/32 . . . Cinnamyl alcohol

C07C 33/34 . Monohydroxylic alcohols containing six-membered aromatic rings and other rings

C07C 33/36 . Polyhydroxylic alcohols containing six-membered aromatic rings and other rings

C07C 33/38 . Alcohols containing six-membered aromatic rings and other rings and having unsaturation outside the aromatic rings

C07C 33/40 . Halogenated unsaturated alcohols

C07C 33/42 . . Acyclic

C07C 33/423 . . . {containing only double bonds as unsaturation }

C07C 33/426 . . . {containing only triple bonds as unsaturation }

C07C 33/44 . . containing rings other than six-membered aromatic rings

C07C 33/46 . . containing only six-membered aromatic rings as cyclic parts

C07C 33/48 . . . with unsaturation outside the aromatic rings

C07C 33/483 . . . . {Monocyclic }

C07C 33/486 . . . . {Polycyclic }

C07C 33/50 . . containing six-membered aromatic rings and other rings

C07C 35/00 Compounds having at least one hydroxy or O-metal group bound to a carbon atom of a ring other than a six-membered aromatic ring

C07C 35/02 . Monocyclic

C07C 35/04 . . containing a three or four-membered ring

C07C 35/045 . . . {containing a four-membered ring }

C07C 35/06 . . containing a five-membered ring

C07C 35/08 . . containing a six-membered ring

C07C 35/12 . . . Menthol

C07C 35/14 . . . with more than one hydroxy group bound to the ring

C07C 35/16 . . . . Inositols

C07C 35/17 . . . with unsaturation only outside the ring

C07C 35/18 . . . with unsaturation at least in the ring

C07C 35/20 . . containing a seven or eight-membered ring

C07C 35/205 . . containing a nine to twelve-membered ring, e.g. cyclododecanols

C07C 35/21 . polycyclic, at least one hydroxy group bound to a non-condensed ring

C07C 35/22 . polycyclic, at least one hydroxy group bound to a condensed ring system

C07C 35/23 . . with hydroxy on a condensed ring system having two rings

C07C 35/24 . . . the condensed ring system containing five carbon atoms

C07C 35/26 . . . . bicyclopentadienols

C07C 35/27 . . . the condensed ring system containing six carbon atoms
C07C 35/28 . . . the condensed ring system containing seven carbon atoms
C07C 35/29 . . . . being a (2.2.1) system
C07C 35/30 . . . . . Borneol
Isoborneol
C07C 35/31 . . . the condensed ring system containing eight carbon atoms
C07C 35/32 . . . the condensed ring system being a (4.3.0) system, e.g. indenols
C07C 35/34 . . . the condensed ring system being a (5.3.0.) system, e.g. azulenols
C07C 35/36 . . . the condensed ring system being a (4.4.0) system, e.g. naphols
C07C 35/37 . . with a hydroxy group on a condensed system having three rings
C07C 35/38 . . . derived from the fluorene skeleton
C07C 35/40 . . . derived from the anthracene skeleton
C07C 35/42 . . . derived from the phenanthrene skeleton
C07C 35/44 . . with a hydroxy group on a condensed ring system having more than three rings

C07C 35/46 . O-metal derivatives of the cyclically bound hydroxy groups

C07C 35/48 . Halogenated derivatives
C07C 35/50 . . Alcohols with at least two rings
C07C 35/52 . . Alcohols with a condensed ring system

C07C 37/00 Preparation of compounds having hydroxy or O-metal groups bound to a carbon atom of a six-membered aromatic ring

C07C 37/001 . {by modification in a side chain }
C07C 37/002 . . {by transformation of a functional group, e.g. oxo, carboxyl }
C07C 37/003 . . {by hydrogenation of an unsaturated part }

C07C 37/004 . {by obtaining phenols from plant material or from animal material }

C07C 37/005 . {by obtaining phenols from products, waste products or side-products of processes, not directed to the production of phenols, by conversion or working-up }
C07C 37/006 . . {from the petroleum industry }
C07C 37/007 . . {from the tar industry }
C07C 37/008 . . {from coke ovens }
C07C 37/009 . . {from waste water (treatment of waste water C02F) }

C07C 37/01 . by replacing functional groups bound to a six-membered aromatic ring by hydroxy groups, e.g. by hydrolysis
C07C 37/02 . . by substitution of halogen
C07C 37/04 . . by substitution of SO3H groups or a derivative thereof
C07C 37/045 . . by substitution of a group bound to the ring by nitrogen
C07C 37/05 . . . by substitution of a NH2 group
C07C 37/055 . . the substituted group being bound to oxygen, e.g. ether group
C07C 37/0555 . . . {being esterified hydroxy groups }

C07C 37/06 . by conversion of non-aromatic six-membered rings or of such rings formed in situ into aromatic six-membered rings, e.g. by dehydrogenation

C07C 37/07 . . with simultaneous reduction of C=O group in that ring

C07C 37/08 . by decomposition of hydroperoxides, e.g. cumene hydroperoxide

C07C 37/11 . by reaction increasing the number of carbon atoms

C07C 37/115 . . {using acetals }

C07C 37/14 . . by addition reactions, i.e. reactions involving at least one carbon-to-carbon unsaturated bond

C07C 37/16 . . by condensation involving hydroxy groups of phenols or alcohols or the ether or mineral ester group derived therefrom

C07C 37/18 . . by condensation involving halogen atoms of halogenated compounds

C07C 37/20 . . using aldehydes or ketones

C07C 37/48 . by exchange of hydrocarbon groups, which may be substituted, from the same of other compounds, e.g. transalkylation

C07C 37/50 . by reactions decreasing the number of carbon atoms (C07C 37/04, C07C 37/045, C07C 37/055, C07C 37/08 take precedence)

C07C 37/52 . . by splitting polyaromatic compounds, e.g. polyphenolalkanes

C07C 37/54 . . . by hydrolysis of lignin or sulfite waste liquor

C07C 37/56 . . by replacing a carboxyl or aldehyde group by a hydroxy group

C07C 37/58 . by oxidation reactions introducing directly hydroxy groups on a =CH-group belonging to a six-membered aromatic ring with the aid of molecular oxygen

C07C 37/60 . by oxidation reactions introducing directly hydroxy groups on a =CH-group belonging to a six-membered aromatic ring with the aid of other oxidants than molecular oxygen or their mixtures with molecular oxygen

C07C 37/62 . by introduction of halogen
by substitution of halogen atoms by other halogen atoms

C07C 37/64 . Preparation of O-metal compounds with O-metal group bound to a carbon atom belonging to a six-membered aromatic ring

C07C 37/66 . . by conversion of hydroxy groups to O-metal groups

C07C 37/68 . Purification
separation
Use of additives, e.g. for stabilisation { (C07C 37/004 and C07C 37/005 take precedence) }

C07C 37/685 . . {Processes comprising at least two steps in series }

C07C 37/70 . . by physical treatment

C07C 37/72 . . . by liquid-liquid treatment

C07C 37/74 . . . by distillation

C07C 37/76 . . . . by steam distillation

C07C 37/78 . . . . by azeotropic distillation

C07C 37/80 . . . . by extractive distillation

C07C 37/82 . . . by solid-liquid treatment
by chemisorption

C07C 37/84 . . . by crystallisation

C07C 37/86 . . by treatment giving rise to a chemical modification (chemisorption C07C 37/82)

C07C 37/88 . . Use of additives, e.g. for stabilisation

C07C 39/00 Compounds having at least one hydroxy or O-metal group bound to a carbon atom of a six-membered aromatic ring

NOTE

In condensed ring systems of six-membered aromatic rings and other rings, the double bond belonging to the benzene ring is not considered as unsaturated for the non-aromatic ring condensed thereon.

C07C 39/02 . monocyclic with no unsaturation outside the aromatic ring

C07C 39/04 . . Phenol

C07C 39/06 . . Alkylated phenols

C07C 39/07 . . . containing only methyl groups, e.g. cresols, xylenols

C07C 39/08 . . Dihydroxy benzenes
alkylated derivatives thereof

C07C 39/10 . . Polyhydroxy benzenes
alkylated derivatives thereof (C07C 39/08 takes precedence)

C07C 39/11 . . alkylated hydroxy benzenes containing also acyclically bound hydroxy groups, e.g. satigenol

C07C 39/12 . polycyclic with no unsaturation outside the aromatic rings

C07C 39/14 . . with at least one hydroxy group on a condensed ring system containing two rings

C07C 39/15 . . with all hydroxy groups on non-condensed rings, {e.g. phenylphenol }

C07C 39/16 . . . Bis-(hydroxyphenyl) alkanes
Tris-(hydroxyphenyl)alkanes

C07C 39/17 . . containing other rings in addition to the six-membered aromatic rings, {e.g. cyclohexylphenol }

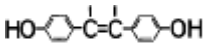
C07C 39/18 . monocyclic with unsaturation outside the aromatic ring

C07C 39/19 . . containing carbon-to-carbon double bonds but no carbon-to-carbon triple bonds

C07C 39/20 . . . Hydroxy-styrenes

C07C 39/205 . polycyclic, containing only six-membered aromatic rings as cyclic parts with unsaturation outside the rings

C07C 39/21 . . with at least one hydroxy group on a non-condensed ring

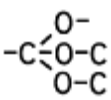
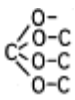
C07C 39/215 . . . containing  , e.g. diethylstilbestrol

C07C 39/225 . . with at least one hydroxy group on a condensed ring system

C07C 39/23 . polycyclic, containing six-membered aromatic rings and other rings, with unsaturation outside the aromatic rings

C07C 39/235 . Metal derivatives of a hydroxy group bound to a six-membered aromatic ring

C07C 39/24 . Halogenated derivatives
C07C 39/245 . . {monocyclic polyhydroxylic containing halogens bound to ring carbon atoms }
C07C 39/26 . . monocyclic monohydroxylic containing halogen bound to ring carbon atoms
C07C 39/27 . . . all halogen atoms being bound to ring carbon atoms
C07C 39/28 . . . . the halogen being one chlorine atom
C07C 39/30 . . . . the halogen being two chlorine atoms
C07C 39/32 . . . . the halogen being three chlorine atoms
C07C 39/34 . . . . the halogen being four chlorine atoms
C07C 39/36 . . . . Pentachlorophenol
C07C 39/367 . . polycyclic non-condensed, containing only six-membered aromatic rings as cyclic parts e.g. halogenated poly-hydroxyphenylalkanes
C07C 39/373 . . with all hydroxy groups on non-condensed rings and with unsaturation outside the aromatic rings
C07C 39/38 . . with at least one hydroxy group on a condensed ring system containing two rings
C07C 39/40 . . with at least one hydroxy group on a condensed ring system containing more than two rings
C07C 39/42 . . containing six-membered aromatic rings and other rings
C07C 39/44 . . Metal derivatives of an hydroxy group bound to a carbon atom of a six-membered aromatic ring

C07C 41/00 **Preparation of ethers**
Preparation of compounds having  **groups,**  **groups or**  **groups**

C07C 41/01 . Preparation of ethers
C07C 41/02 . . from oxiranes
C07C 41/03 . . . by reaction of oxirane rings with hydroxy groups
C07C 41/05 . . by addition of compounds to unsaturated compounds
C07C 41/06 . . . by addition of organic compounds only
C07C 41/08 . . . . to carbon-to-carbon triple bonds
C07C 41/09 . . by dehydratation of compounds containing hydroxy groups
C07C 41/14 . . by exchange of organic parts on the ether-oxygen for other organic parts, e.g. by trans-etherification
C07C 41/16 . . by reaction of esters of mineral or organic acids with hydroxy or O-metal groups
C07C 41/18 . . by reactions not forming ether-oxygen bonds
C07C 41/20 . . . by hydrogenation of carbon-to-carbon double or triple bonds
C07C 41/22 . . . by introduction of halogens
by substitution of halogen atoms by other halogen atoms
C07C 41/24 . . . by elimination of halogens, e.g. elimination of HCl
C07C 41/26 . . . by introduction of hydroxy or O-metal groups

C07C 41/28 . . . from acetals, e.g. by dealcoholysis

C07C 41/30 . . . by increasing the number of carbon atoms, e.g. by oligomerisation

C07C 41/32 . . by isomerisation

C07C 41/34 . . Separation
Purification
Stabilisation
Use of additives

C07C 41/36 . . . by solid-liquid treatment
by chemisorption

C07C 41/38 . . . by liquid-liquid treatment

C07C 41/40 . . . by change of physical state, e.g. by crystallisation

C07C 41/42 . . . . by distillation

C07C 41/44 . . . by treatments giving rise to a chemical modification (by chemisorption C07C 41/36)

C07C 41/46 . . . Use of additives, e.g. for stabilisation

C07C 41/48 . Preparation of compounds having  group

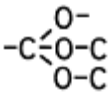
C07C 41/50 . . by reactions producing  groups

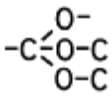
C07C 41/52 . . . by substitution of halogen only

C07C 41/54 . . . by addition of compounds to unsaturated carbon-to-carbon bonds

C07C 41/56 . . . by condensation of aldehydes, paraformaldehyde, or ketones

C07C 41/58 . . Separation
Purification
Stabilisation
Use of additives

C07C 41/60 . Preparation of compounds having  groups or  groups

C07C 43/00 **Ethers**
Compounds having  **groups,**  **groups or**  **groups**

C07C 43/02 . Ethers

C07C 43/03 . . having all ether-oxygen atoms bound to acyclic carbon atoms

C07C 43/04 . . . Saturated ethers

C07C 43/043 . . . . { Dimethyl ether }

C07C 43/046 . . . . { Alkyl tert-alkyl ether, e.g. CH3OC(CH3)3 }

C07C 43/06 . . . . Diethyl ether

C07C 43/10 . . . . of polyhydroxy compounds

C07C 43/11 . . . . . Polyethers containing -O-(C-C-O-)n units with ≤ 2 n ≤ 10

C07C 43/115 . . . . containing carbocyclic rings

C07C 43/12 . . . . containing halogen

C07C 43/123 . . . . . {both carbon chains are substituted by halogen atoms }
C07C 43/126 . . . . . { having more than one ether bond }
C07C 43/13 . . . . containing hydroxy or O-metal groups (C07C 43/11 takes precedence)
C07C 43/132 . . . . . {both carbon chains being substituted by hydroxy or O-metal groups }
C07C 43/135 . . . . . { having more than one ether bond }
C07C 43/137 . . . . . {containing halogen }
C07C 43/14 . . . Unsaturated ethers
C07C 43/15 . . . . containing only non-aromatic carbon-to-carbon double bonds
C07C 43/16 . . . . . Vinyl ethers
C07C 43/162 . . . . containing rings other than six-membered aromatic rings
C07C 43/164 . . . . containing six-membered aromatic rings
C07C 43/166 . . . . . having unsaturation ouside the aromatic rings
C07C 43/168 . . . . . containing six-membered aromatic rings and other rings
C07C 43/17 . . . . containing halogen
C07C 43/172 . . . . . containing rings other than six-membered aromatic rings
C07C 43/174 . . . . . containing six-membered aromatic rings
C07C 43/1742 . . . . . {with halogen atoms bound to the aromatic rings }
C07C 43/1745 . . . . . {having more than one ether bound }
C07C 43/1747 . . . . . {containing six membered aromatic rings and other rings }
C07C 43/176 . . . . . having unsaturation outside the aromatic rings
C07C 43/178 . . . . containing hydroxy or O-metal groups
C07C 43/1781 . . . . . {containing rings other than six-membered aromatic rings }
C07C 43/1782 . . . . . {containing six-membered aromatic rings }
C07C 43/1783 . . . . . {with hydroxy or -O-metal groups bound to the aromatic rings }
C07C 43/1785 . . . . . {having more than one ether bound }
C07C 43/1786 . . . . . {containing halogen }
C07C 43/1787 . . . . . { containing six-membered aromatic rings and having unsaturation outside the aromatic rings }
C07C 43/1788 . . . . . {containing six-membered aromatic rings and other rings }
C07C 43/18 . . having an ether-oxygen atom bound to a carbon atom of a ring other than a six-membered aromatic ring
C07C 43/184 . . . to a carbon atom of a non-condensed ring
C07C 43/188 . . . Unsaturated ethers
C07C 43/192 . . . containing halogen
C07C 43/196 . . . containing hydroxy or O-metal groups
C07C 43/20 . . having an ether-oxygen atom bound to a carbon atom of a six-membered aromatic ring
C07C 43/202 . . . {the aromatic ring being a naphthalene }
C07C 43/205 . . . the aromatic ring being a non-condensed ring
C07C 43/2055 . . . . { containing more than one ether bond }
C07C 43/21 . . . containing rings other than six-membered aromatic rings
C07C 43/215 . . . having unsaturation outside the six-membered aromatic ring
C07C 43/225 . . . containing halogen

C07C 43/23 . . . containing hydroxy or O-metal groups

C07C 43/235 . . having an ether-oxygen atom bound to a carbon atom of a six-membered aromatic ring and to a carbon atom of a ring other than a six-membered aromatic ring

C07C 43/243 . . . having unsaturation outside the six-membered aromatic rings

C07C 43/247 . . . containing halogen

C07C 43/253 . . . containing hydroxy or O-metal groups

C07C 43/257 . . having an ether-oxygen atom bound to carbon atoms both belonging to six-membered aromatic rings

C07C 43/263 . . . the aromatic rings being non-condensed

C07C 43/267 . . . containing other rings

C07C 43/275 . . . having all ether-oxygen atoms bound to carbon atoms of six-membered aromatic rings

C07C 43/285 . . . having unsaturation outside the six-membered aromatic rings

C07C 43/29 . . . containing halogen

C07C 43/295 . . . containing hydroxy or O-metal groups

C07C 43/30 . Compounds having  groups

NOTE

The acetal carbon atom is the carbon atom of the

group

C07C 43/303 . . having acetal carbon atoms bound to acyclic carbon atoms

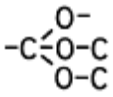
C07C 43/305 . . having acetal carbon atoms as rings members or bound to carbon atoms of rings other than six-membered aromatic rings

C07C 43/307 . . having acetal carbon atoms bound to carbon atoms of six-membered aromatic rings

C07C 43/313 . . containing halogen

C07C 43/315 . . containing oxygen atoms singly bound to carbon atoms not being acetal carbon atoms

C07C 43/317 . . having  groups, X being hydrogen or metal

C07C 43/32 . Compounds having  groups or  groups

C07C 45/00 **Preparation of compounds having >C = O groups bound only to carbon or hydrogen atoms**
Preparation of chelates of such compounds

C07C 45/002 . {by dehydrogenation }

C07C 45/004 . {by reaction with organometalhalides }

C07C 45/006 . {by hydrogenation of aromatic hydroxy compounds }

C07C 45/008 . {by reaction with tri- or tetrahalomethyl compounds }

C07C 45/26 . by hydration of carbon-to-carbon triple bonds

C07C 45/27 . by oxidation (with ozone C07C 45/40)
C07C 45/28 . . of CHx-moieties
C07C 45/29 . . of hydroxy groups
C07C 45/292 . . . {with chromium derivatives }
C07C 45/294 . . . {with hydrogen peroxide }
C07C 45/296 . . . {with lead derivatives }
C07C 45/298 . . . {with manganese derivatives }
C07C 45/30 . . with halogen containing compounds, e.g. hypohalogenation
C07C 45/305 . . . {with halogenochromate reagents, e.g. pyridinium cholorchromate }
C07C 45/31 . . with compounds containing mercury atoms, which may be regenerated in situ, e.g. by oxygen
C07C 45/32 . . with molecular oxygen
C07C 45/33 . . . of CHx-moieties
C07C 45/34 . . . . in unsaturated compounds
C07C 45/35 . . . . . in propene or isobutene
C07C 45/36 . . . . . in compounds containing six-membered aromatic rings
C07C 45/37 . . . of C-O-functional groups to >C=O groups
C07C 45/38 . . . . being a primary hydroxyl group
C07C 45/39 . . . . being a secondary hydroxyl group

C07C 45/40 . by oxidation with ozone
by ozonolysis

C07C 45/41 . by hydrogenolysis or reduction of carboxylic groups or functional derivatives thereof

C07C 45/42 . by hydrolysis
C07C 45/43 . . of >CX2 groups, X being halogen

C07C 45/44 . by reduction and hydrolysis of nitriles

C07C 45/45 . by condensation
C07C 45/455 . . {with carboxylic acids or their derivatives }
C07C 45/46 . . Friedel-Crafts reactions
C07C 45/47 . . using phosgene
C07C 45/48 . . involving decarboxylation

C07C 45/49 . by reaction with carbon monoxide
C07C 45/50 . . by oxo-reactions
C07C 45/505 . . . {Asymmetric hydroformylation }

C07C 45/51 . by pyrolysis, rearrangement or decomposition

C07C 45/511 . . {involving transformation of singly bound oxygen functional groups to >C = O groups (involving two hydroxy groups C07C 45/52; hydroperoxides C07C 45/53) }

C07C 45/512 . . . {the singly bound functional group being a free hydroxyl group }

C07C 45/513 . . . {the singly bound functional group being an etherified hydroxyl group }

C07C 45/515 . . . {the singly bound functional group being an acetalised, ketalised hemi-acetalised, or hemi-ketalised hydroxyl group (cyclic acetals or ketals C07C 45/59, C07C 45/60) }

C07C 45/516 . . {involving transformation of nitrogen-containing compounds to >C = O groups }

C07C 45/517 . . {involving transformation of peroxy-compounds to >C = O groups }

C07C 45/518 . . {involving transformation of sulfur-containing compounds to >C = O groups }

C07C 45/52 . . by dehydration and rearrangement involving two hydroxy groups in the same molecule

C07C 45/53 . . of hydroperoxides

C07C 45/54 . . of compounds containing doubly bound oxygen atoms, e.g. esters

C07C 45/55 . . of oligo- or polymeric oxo-compounds

C07C 45/56 . from heterocyclic compounds (C07C 45/55 takes precedence)

C07C 45/562 . . {with nitrogen as the only hetero atom }

C07C 45/565 . . . {by reaction with hexamethylene-tetramine }

C07C 45/567 . . {with sulfur as the only hetero atom }

C07C 45/57 . . with oxygen as the only heteroatom

C07C 45/58 . . . in three-membered rings

C07C 45/59 . . . in five-membered rings (from ozonides C07C 45/40)

C07C 45/60 . . . in six-membered rings

C07C 45/61 . by reactions not involving the formation of >C = O groups

C07C 45/62 . . by hydrogenation of carbon-to-carbon double or triple bonds

C07C 45/63 . . by introduction of halogen
by substitution of halogen atoms by other halogen atoms

C07C 45/64 . . by introduction of functional groups containing oxygen only in singly bound form

C07C 45/65 . . by splitting-off hydrogen atoms or functional groups
by hydrogenolysis of functional groups

C07C 45/66 . . . by dehydration

C07C 45/67 . . by isomerisation
by change of size of the carbon skeleton

C07C 45/673 . . . {by change of size of the carbon skeleton }

C07C 45/676 . . . . {by elimination of carboxyl groups }

C07C 45/68 . . . by increase in the number of carbon atoms

C07C 45/69 . . . . by addition to carbon-to-carbon double or triple bonds

C07C 45/70 . . . . by reaction with functional groups containing oxygen only in singly bound form

C07C 45/71 . . . . . being hydroxy groups

C07C 45/72 . . . . by reaction of compounds containing >C = O groups with the same or other compounds containing >C = O groups

C07C 45/73 . . . . . combined with hydrogenation
C07C 45/74 . . . . . combined with dehydration
C07C 45/75 . . . . . Reactions with formaldehyde
C07C 45/76 . . . with the aid of ketenes

C07C 45/77 . Preparation of chelates of aldehydes or ketones

C07C 45/78 . Separation
Purification
Stabilisation
Use of additives
C07C 45/783 . . {by gas-liquid treatment, e.g. by gas-liquid absorption }
C07C 45/786 . . {by membrane separation process, e.g. pervaporation, perstraction, reverse osmosis }
C07C 45/79 . . by solid-liquid treatment
by chemisorption
C07C 45/80 . . by liquid-liquid treatment
C07C 45/81 . . by change in the physical state, e.g. crystallisation
C07C 45/82 . . . by distillation
C07C 45/83 . . . . by extractive distillation
C07C 45/84 . . . . by azeotropic distillation
C07C 45/85 . . by treatment giving rise to a chemical modification (by chemisorption C07C 45/79)
C07C 45/86 . . Use of additives, e.g. for stabilisation

C07C 45/87 . Preparation of ketenes or dimeric ketenes (heterocyclic compounds C07D)
C07C 45/88 . . from ketones
C07C 45/89 . . from carboxylic acids, their anhydrides, esters or halides
C07C 45/90 . . Separation
Purification
Stabilisation
Use of additives

C07C 46/00 Preparation of quinones

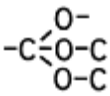
C07C 46/02 . by oxidation giving rise to quinoid structures
C07C 46/04 . . of unsubstituted ring carbon atoms in six-membered aromatic rings
C07C 46/06 . . of at least one hydroxy group on a six-membered aromatic ring
C07C 46/08 . . . with molecular oxygen

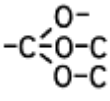
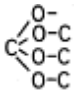
C07C 46/10 . Separation
Purification
Stabilisation
Use of additives

C07C 47/00 Compounds having -CHO groups

C07C 47/02 . Saturated compounds having -CHO groups bound to acyclic carbon atoms or to

hydrogen

C07C 47/04 . . Formaldehyde
C07C 47/06 . . Acetaldehyde
C07C 47/105 . . containing rings
C07C 47/11 . . . monocyclic
C07C 47/115 . . . containing condensed ring systems
C07C 47/12 . . containing more than one -CHO group
C07C 47/127 . . . Glyoxal
C07C 47/133 . . . containing rings
C07C 47/14 . . containing halogen
C07C 47/16 . . . Trichloroacetaldehyde
C07C 47/17 . . . containing rings
C07C 47/19 . . containing hydroxy groups (sugars C07H)
C07C 47/192 . . . containing rings
C07C 47/195 . . . containing halogen
C07C 47/198 . . containing ether groups,  groups,  groups, or  groups

C07C 47/20 . Unsaturated compounds having -CHO groups bound to acyclic carbon atoms
C07C 47/21 . . with only carbon-to-carbon double bonds as unsaturation
C07C 47/22 . . . Acryaldehyde
Methacryaldehyde
C07C 47/222 . . with only carbon-to-carbon triple bonds as unsaturation
C07C 47/225 . . containing rings other than six-membered aromatic rings
C07C 47/228 . . containing six-membered aromatic rings, e.g. phenylacetaldehyde
C07C 47/23 . . . polycyclic
C07C 47/232 . . . having unsaturation outside the aromatic rings
C07C 47/235 . . containing six-membered aromatic rings and other rings
C07C 47/238 . . . having unsaturation outside the aromatic rings
C07C 47/24 . . containing halogen
C07C 47/26 . . containing hydroxy groups
C07C 47/263 . . . acyclic
C07C 47/267 . . . containing rings other than six-membered aromatic rings
C07C 47/27 . . . containing six-membered aromatic rings
C07C 47/273 . . . containing halogen
C07C 47/277 . . containing ether groups,  groups,  groups, or  groups

C07C 47/28 . Saturated compounds having -CHO groups bound to carbon atoms of rings other than six-membered aromatic rings
C07C 47/293 . . with three- or four-membered ring

C07C 47/30 .. with a five-membered ring

C07C 47/32 .. with a six-membered ring

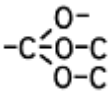
C07C 47/33 .. with a seven- to twelve-membered ring

C07C 47/34 .. polycyclic

C07C 47/347 .. having a -CHO group on a condensed ring system

C07C 47/353 .. containing halogen

C07C 47/36 .. containing hydroxy groups

C07C 47/37 .. containing ether groups,  groups,  groups, or  groups

C07C 47/38 . Unsaturated compounds having -CHO groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 47/395 .. with a three- or four-membered ring

C07C 47/40 .. with a five-membered ring

C07C 47/42 .. with a six-membered ring

C07C 47/43 .. with a seven- to twelve-membered ring

C07C 47/44 .. polycyclic

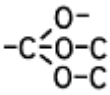
C07C 47/445 ... containing a condensed ring system

C07C 47/45 .. having unsaturation outside the rings

C07C 47/453 .. containing six-membered aromatic rings

C07C 47/457 .. containing halogen

C07C 47/46 .. containing hydroxy groups

C07C 47/47 .. containing ether groups,  groups,  groups, or  groups

C07C 47/52 . Compounds having -CHO groups bound to carbon atoms of six-membered aromatic rings

C07C 47/54 .. Benzaldehyde

C07C 47/542 .. Alkylated benzaldehydes

C07C 47/544 .. Diformyl benzenes
Alkylated derivatives thereof

C07C 47/546 .. polycyclic

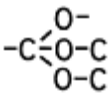
C07C 47/548 .. having unsaturation outside the six-membered aromatic rings

C07C 47/55 .. containing halogen

C07C 47/56 .. containing hydroxy groups

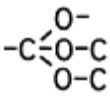
C07C 47/565 ... all hydroxy groups bound to the ring

C07C 47/57 ... polycyclic

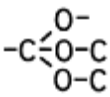
C07C 47/575 .. containing ether groups,  groups,  groups, or  groups

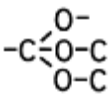
C07C 47/58 ... Vanillin

C07C 49/00 **Ketones**
Ketenes
Dimeric ketenes (heterocyclic compounds C07D , e.g. beta-lactones C07D 305/12)
Ketonic chelates

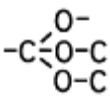
C07C 49/04 . Saturated compounds containing keto groups bound to acyclic carbon atoms
C07C 49/08 . . Acetone
C07C 49/10 . . Methyl-ethyl ketone
C07C 49/105 . . containing rings
C07C 49/11 . . . monocyclic
C07C 49/115 . . . containing condensed ring systems
C07C 49/12 . . Ketones containing more than one keto group
C07C 49/14 . . . Acetylacetone, i.e. 2,4-pentanedione
C07C 49/15 . . . containing rings
C07C 49/16 . . containing halogen
C07C 49/163 . . . containing rings
C07C 49/167 . . . containing only fluorine as halogen
C07C 49/17 . . containing hydroxy groups (sugars C07H)
C07C 49/172 . . . containing rings
C07C 49/173 . . . containing halogen
C07C 49/175 . . containing ether groups,  groups,  groups, or  groups
C07C 49/185 . . containing -CHO groups

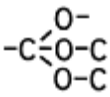
C07C 49/20 . Unsaturated compounds containing keto groups bound to acyclic carbon atoms
C07C 49/203 . . with only carbon-to-carbon double bonds as unsaturation
C07C 49/205 . . . Methyl-vinyl ketone
C07C 49/207 . . with only carbon-to-carbon triple bonds as unsaturation
C07C 49/21 . . containing rings other than six-membered aromatic rings
C07C 49/213 . . containing six-membered aromatic rings
C07C 49/215 . . . polycyclic
C07C 49/217 . . . having unsaturation outside the aromatic rings
C07C 49/223 . . . . polycyclic
C07C 49/225 . . containing six-membered aromatic rings and other rings
C07C 49/227 . . containing halogen
C07C 49/23 . . . containing rings other than six-membered aromatic rings
C07C 49/233 . . . containing six-membered aromatic rings
C07C 49/235 . . . . having unsaturation outside the aromatic rings
C07C 49/237 . . . containing six-membered aromatic rings and other rings
C07C 49/24 . . containing hydroxy groups
C07C 49/242 . . . containing rings other than six-membered aromatic rings

C07C 49/245 . . . containing six-membered aromatic rings
C07C 49/248 . . . . having unsaturation outside the aromatic rings
C07C 49/252 . . . containing six-membered aromatic rings and other rings
C07C 49/255 . . containing ether groups,  groups,  groups, or  groups
C07C 49/258 . . containing -CHO groups

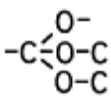
C07C 49/29 . Saturated compounds containing keto groups bound to rings
C07C 49/293 . . to a three- or four-membered ring
C07C 49/297 . . to a five-membered ring
C07C 49/303 . . to a six-membered ring
C07C 49/307 . . to a seven- to twelve-membered ring
C07C 49/313 . . polycyclic
C07C 49/317 . . . both carbon atoms bound to the keto group belonging to rings
C07C 49/323 . . . having keto groups bound to condensed ring systems
C07C 49/327 . . containing halogen
C07C 49/333 . . . polycyclic
C07C 49/337 . . containing hydroxy groups
C07C 49/345 . . . polycyclic
C07C 49/35 . . containing ether groups,  groups,  groups, or  groups
C07C 49/355 . . containing -CHO groups

C07C 49/385 . Saturated compounds containing a keto group being part of a ring
C07C 49/39 . . of a three- or four-membered ring
C07C 49/395 . . of a five-membered ring
C07C 49/403 . . of a six-membered ring
C07C 49/407 . . . Menthones
C07C 49/413 . . of a seven- to twelve-membered ring
C07C 49/417 . . polycyclic
C07C 49/423 . . . a keto group being part of a condensed ring system
C07C 49/427 . . . . having two rings
C07C 49/433 . . . . . the condensed ring system containing seven carbon atoms
C07C 49/437 . . . . . Camphor
Fenchone
C07C 49/443 . . . . . the condensed ring system containing eight or nine carbon atoms
C07C 49/447 . . . . . the condensed ring system containing ten carbon atoms
C07C 49/453 . . . . having three rings
C07C 49/457 . . containing halogen
C07C 49/463 . . . a keto group being part of a six-membered ring
C07C 49/467 . . . polycyclic

C07C 49/473 .... a keto group being part of a condensed ring system
C07C 49/477 ..... having two rings
C07C 49/483 ..... having three rings
C07C 49/487 .. containing hydroxy groups
C07C 49/493 ... a keto group being part of a three- to five-membered ring
C07C 49/497 ... a keto group being part of a six-membered ring
C07C 49/503 ... a keto group being part of a seven- to twelve-membered ring
C07C 49/507 ... polycyclic
C07C 49/513 .... a keto group being part of a condensed ring system
C07C 49/517 .. containing ether groups,  groups,  groups, or  groups
C07C 49/523 .. containing -CHO groups

C07C 49/527 . Unsaturated compounds containing keto groups bound to rings other than six-membered aromatic rings
C07C 49/533 .. to a three- or four-membered ring
C07C 49/537 .. to a five-membered ring
C07C 49/543 .. to a six-membered ring
C07C 49/547 .. to a seven- to twelve-membered ring
C07C 49/553 .. polycyclic
C07C 49/557 .. having unsaturation outside the rings
C07C 49/563 .. containing six-membered aromatic rings
C07C 49/567 .. containing halogen
C07C 49/573 .. containing hydroxy groups
C07C 49/577 .. containing ether groups,  groups,  groups, or  groups
C07C 49/583 .. containing -CHO groups

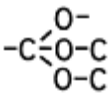
C07C 49/587 . Unsaturated compounds containing a keto groups being part of a ring
C07C 49/593 .. of a three- or four-membered ring
C07C 49/597 .. of a five-membered ring
C07C 49/603 .. of a six-membered ring
C07C 49/607 .. of a seven-to twelve-membered ring
C07C 49/613 .. polycyclic
C07C 49/617 ... a keto group being part of a condensed ring system
C07C 49/623 .... having two rings
C07C 49/627 ..... the condensed ring system containing seven carbon atoms
C07C 49/633 ..... the condensed ring system containing eight or nine carbone atoms
C07C 49/637 ..... the condensed ring system containing ten carbon atoms
C07C 49/643 .... having three rings
C07C 49/647 .. having unsaturation outside the ring

C07C 49/653 . . . polycyclic
C07C 49/657 . . containing six-membered aromatic rings
C07C 49/665 . . . a keto group being part of a condensed ring system
C07C 49/67 . . . . having two rings, e.g. tetralones
C07C 49/675 . . . . having three rings
C07C 49/683 . . . having unsaturation outside the aromatic rings
C07C 49/687 . . containing halogen
C07C 49/693 . . . polycyclic
C07C 49/697 . . . containing six-membered aromatic rings
C07C 49/703 . . containing hydroxy groups
C07C 49/707 . . . a keto group being part of a three- to five-membered ring
C07C 49/713 . . . a keto group being part of a six-membered ring
C07C 49/717 . . . a keto group being part of a seven- to twelve-membered ring
C07C 49/723 . . . polycyclic
C07C 49/727 . . . . a keto group being part of a condensed ring system
C07C 49/733 . . . . . having two rings
C07C 49/737 . . . . . having three rings
C07C 49/743 . . . having unsaturation outside the rings, e.g. humulones, lupulones
C07C 49/747 . . . containing six-membered aromatic rings
C07C 49/753 . . containing ether groups,  groups,  groups, or  groups
C07C 49/755 . . . a keto group being part of a condensed ring system with two or three rings, at least one ring being a six-membered aromatic ring
C07C 49/757 . . containing -CHO groups

C07C 49/76 . Ketones containing a keto group bound to a six-membered aromatic ring (compounds having a keto group being part of a condensed ring system and being bound to a six-membered aromatic ring C07C 49/657 to C07C 49/757)
C07C 49/78 . . Acetophenone
C07C 49/782 . . polycyclic
C07C 49/784 . . . with all keto groups bound to a non-condensed ring
C07C 49/786 . . . . Benzophenone
C07C 49/788 . . . with keto groups bound to a condensed ring system
C07C 49/792 . . . containing rings other than six-membered aromatic rings
C07C 49/794 . . having unsaturation outside an aromatic ring
C07C 49/796 . . . polycyclic
C07C 49/798 . . . containing rings other than six-membered aromatic rings
C07C 49/80 . . containing halogen
C07C 49/807 . . . all halogen atoms bound to the ring
C07C 49/813 . . . polycyclic
C07C 49/82 . . containing hydroxy groups
C07C 49/825 . . . all hydroxy groups bound to the ring

C07C 49/83 . . . polycyclic

C07C 49/835 . . . having unsaturation outside an aromatic ring

C07C 49/84 . . containing ether groups,  groups,  groups, or  groups

C07C 49/86 . . containing -CHO groups

C07C 49/88 . Ketenes
Dimeric ketenes

C07C 49/90 . . Ketene, i.e. C2H2O

C07C 49/92 . Ketonic chelates

C07C 50/00 **Quinones** (for quinone methides, see unsaturated ketones with a keto group being part of a ring)

NOTE

In this group, quinhydrones are classified according to their quinoid part.

C07C 50/02 . with monocyclic quinoid structure

C07C 50/04 . . Benzoquinones, i.e. C6H4O2

C07C 50/06 . . with unsaturation outside the quinoid structure

C07C 50/08 . with polycyclic non-condensed quinoid structure

C07C 50/10 . the quinoid structure being part of a condensed ring system containing two rings

C07C 50/12 . . Naphthoquinones, i.e. C10H6O2

C07C 50/14 . . with unsaturation outside the ring system, e.g. vitamin K1

C07C 50/16 . the quinoid structure being part of a condensed ring system containing three rings

C07C 50/18 . . Anthraquinones, i.e. C14H8O2

C07C 50/20 . . with unsaturation outside the ring system

C07C 50/22 . the quinoid structure being part of a condensed ring system containing four or more rings

C07C 50/24 . containing halogen

C07C 50/26 . containing groups having oxygen atoms singly bound to carbon atoms

C07C 50/28 . . with monocyclic quinoid structure

C07C 50/30 . . with polycyclic non-condensed quinoid structure

C07C 50/32 . . the quinoid structure being part of a condensed ring system having two rings

C07C 50/34 . . the quinoid structure being part of a condensed ring system having three rings

C07C 50/36 . . the quinoid structure being part of a condensed ring system having four or more rings

C07C 50/38 . containing -CHO or non-quinoid keto groups

C07C 51/00 **Preparation of carboxylic acids or their salts, halides or anhydrides** (of acids by hydrolysis of oils, fats or waxes C11C)

C07C 51/02 . from salts of carboxylic acids

C07C 51/04 . from carboxylic acid halides

C07C 51/06 . from carboxylic acid amides

C07C 51/08 . from nitriles

C07C 51/083 . from carboxylic acid anhydrides
C07C 51/087 . . by hydrolysis

C07C 51/09 . from carboxylic acid esters or lactones

C07C 51/093 . by hydrolysis of -CX3 groups, X being halogen

C07C 51/097 . from or via nitro-substituted organic compounds

C07C 51/10 . by reaction with carbon monoxide
C07C 51/12 . . on an oxygen-containing group in organic compounds, e.g. alcohols
C07C 51/14 . . on a carbon-to-carbon unsaturated bond in organic compounds
C07C 51/145 . . with simultaneous oxidation

C07C 51/15 . by reaction of organic compounds with carbon dioxide, e.g. Kolbe-Schmitt synthesis

C07C 51/16 . by oxidation (C07C 51/145 takes precedence)
C07C 51/21 . . with molecular oxygen
C07C 51/215 . . . of saturated hydrocarbyl groups
C07C 51/225 . . . . of paraffin waxes
C07C 51/23 . . . of oxygen-containing groups to carboxyl groups
C07C 51/235 . . . . of -CHO groups or primary alcohol groups
C07C 51/245 . . . . of keto groups or secondary alcohol groups
C07C 51/25 . . . of unsaturated compounds containing no six-membered aromatic ring
C07C 51/252 . . . . {of propene, butenes, acrolein or methacrolein }
C07C 51/255 . . . of compounds containing six-membered aromatic rings without ring-splitting
C07C 51/265 . . . . having alkyl side chains which are oxidised to carboxyl groups

NOTE

Reactions of the Katzschmann type, i.e. oxidation of a dialkyl-aromatic compound with intermediate esterification of the mono-acid, see relevant ester groups, even when the end product is a carboxylic acid

C07C 51/27 .. with oxides of nitrogen or nitrogen-containing mineral acids
C07C 51/275 ... of hydrocarbyl groups
C07C 51/285 .. with peroxy-compounds
C07C 51/29 .. with halogen-containing compounds which may be formed in situ
C07C 51/295 .. with inorganic bases, e.g. by alkali fusion
C07C 51/305 .. with sulfur or sulfur-containing compounds
C07C 51/31 .. of cyclic compounds with ring-splitting
C07C 51/313 ... {with molecular oxygen }
C07C 51/316 ... {with oxides of nitrogen or nitrogen-containing mineral acids }

C07C 51/34 . by oxidation with ozone
by hydrolysis of ozonides

C07C 51/347 . by reactions not involving formation of carboxyl groups
C07C 51/353 .. by isomerisation
by change of size of the carbon skeleton
C07C 51/36 .. by hydrogenation of carbon-to-carbon unsaturated bonds
C07C 51/363 .. by introduction of halogen
by substitution of halogen atoms by other halogen atoms
C07C 51/367 .. by introduction of functional groups containing oxygen only in singly bound form
C07C 51/373 .. by introduction of functional groups containing oxygen only in doubly bound form
C07C 51/377 .. by splitting-off hydrogen or functional groups
by hydrogenolysis of functional groups {C07C 51/36 to C07C 51/373 take precedence }
C07C 51/38 ... by decarboxylation

C07C 51/41 . Preparation of salts of carboxylic acids (preparation of soap C11D) {C07C 51/093 to C07C 51/34 take precedence }
C07C 51/412 .. {by conversion of the acids, their salts, esters or anhydrides with the same carboxylic acid part }
C07C 51/414 .. {Preparation of superbasic salts }
C07C 51/416 .. {Henkel reaction and related reactions, i.e. rearrangement of carboxylate salt groups linked to six-membered aromatic rings, in the absence or in the presence of CO or CO2, (e.g. preparation of terepholates from benzoates) ; no additional classification for the subsequent hydrolysis of the salt groups has to be given }
C07C 51/418 .. {Preparation of metal complexes containing carboxylic acid moieties }

C07C 51/42 . Separation
Purification
Stabilisation
Use of additives
C07C 51/43 .. by change of the physical state, e.g. crystallisation
C07C 51/44 ... by distillation
C07C 51/445 .... {by steam distillation }
C07C 51/46 .... by azeotropic distillation
C07C 51/47 .. by solid-liquid treatment
by chemisorption
C07C 51/48 .. by liquid-liquid treatment

C07C 51/487 . . by treatment giving rise to chemical modification (by chemisorption C07C 51/47)
C07C 51/493 . . . whereby carboxylic acid esters are formed
C07C 51/50 . . Use of additives e.g. for stabilisation

C07C 51/54 . Preparation of carboxylic acid anhydrides (by oxidation C07C 51/16)
C07C 51/56 . . from organic acids, their salts, their esters {or their halides, e.g. by carboxylation }
C07C 51/567 . . by reactions not involving carboxylic acid anhydride groups
C07C 51/573 . . Separation
Purification
Stabilisation
Use of additives

C07C 51/58 . Preparation of carboxylic acid halides
C07C 51/60 . . by conversion of carboxylic acids or their anhydrides {or esters, lactones, salts } into halides with the same carboxylic acid part
C07C 51/62 . . by reactions not involving the carboxylic acid halide group
C07C 51/64 . . Separation
Purification
Stabilisation
Use of additives

C07C 53/00 **Saturated compounds having only one carboxyl group bound to an acyclic carbon atom or hydrogen**

C07C 53/02 . Formic acid
C07C 53/06 . . Salts thereof

C07C 53/08 . Acetic acid (pyroligneous acid C10C ; preparation of vinegar C12J)
C07C 53/10 . . Salts thereof

C07C 53/12 . Acetic anhydride (ketene C07C 49/90)

C07C 53/122 . Propionic acid

C07C 53/124 . Acids containing four carbon atoms

C07C 53/126 . Acids containing more than four carbon atoms
C07C 53/128 . . the carboxylic group being bound to a carbon atom bound to at least two other carbon atoms, e.g. neo-acids

C07C 53/132 . containing rings
C07C 53/134 . . monocyclic
C07C 53/136 . . containing condensed ring systems
C07C 53/138 . . . containing an adamantane ring system

C07C 53/15 . containing halogen
C07C 53/16 . . Halogenated acetic acids
C07C 53/18 . . . containing fluorine

C07C 53/19 . . Acids containing three or more carbon atoms
C07C 53/21 . . . containing fluorine
C07C 53/23 . . containing rings

C07C 53/38 . Acyl halides
C07C 53/40 . . Acetyl halides
C07C 53/42 . . of acids containing three or more carbon atoms
C07C 53/44 . . containing rings
C07C 53/46 . . containing halogen outside the carbonyl halide group
C07C 53/48 . . . Halogenated acetyl halides
C07C 53/50 . . . of acids containing three or more carbon atoms

C07C 55/00 Saturated compounds having more than one carboxyl group bound to acyclic carbon atoms

C07C 55/02 . Dicarboxylic acids
C07C 55/06 . . Oxalic acid
C07C 55/07 . . . Salts thereof
C07C 55/08 . . Malonic acid
C07C 55/10 . . Succinic acid
C07C 55/12 . . Glutaric acid
C07C 55/14 . . Adipic acid
C07C 55/16 . . Pimelic acid
C07C 55/18 . . Azelaic acid
C07C 55/20 . . Sebacic acid
C07C 55/21 . . Dicarboxylic acids containing twelve carbon atoms

C07C 55/22 . Tricarboxylic acids

C07C 55/24 . containing more than three carboxyl groups

C07C 55/26 . containing rings {other than aromatic rings }
C07C 55/28 . . monocyclic
C07C 55/30 . . containing condensed ring systems

C07C 55/32 . containing halogen
C07C 55/34 . . containing rings

C07C 55/36 . Acyl halides
C07C 55/38 . . containing rings
C07C 55/40 . . containing halogen outside the carboxyl halide group

C07C 57/00 Unsaturated compounds having carboxyl groups bound to acyclic carbon atoms

C07C 57/02 . with only carbon-to-carbon double bonds as unsaturation

C07C 57/03 . . Monocarboxylic acids
C07C 57/04 . . . Acrylic acid
Methacrylic acid
C07C 57/08 . . . Crotonic acid
C07C 57/10 . . . Sorbic acid
C07C 57/12 . . . Straight chain carboxylic acids containing eighteen carbon atoms
C07C 57/13 . . Dicarboxylic acids
C07C 57/145 . . . Maleic acid
C07C 57/15 . . . Fumaric acid
C07C 57/155 . . . Citraconic acid
C07C 57/16 . . . Muconic acid

C07C 57/18 . with only carbon-to-carbon triple bonds as unsaturation
C07C 57/20 . . Propiolic acid
C07C 57/22 . . Acetylene dicarboxylic acid
C07C 57/24 . . Diacetylene or polyacetylene dicarboxylic acids

C07C 57/26 . containing rings other than six-membered aromatic rings
C07C 57/28 . . containing an adamantane ring system

C07C 57/30 . containing six-membered aromatic rings
C07C 57/32 . . Phenylacetic acid
C07C 57/34 . . containing more than one carboxyl group
C07C 57/36 . . . Phenymalonic acid
C07C 57/38 . . polycyclic
C07C 57/40 . . . containing condensed ring systems
C07C 57/42 . . having unsaturation outside the rings
C07C 57/44 . . . Cinnamic acid

C07C 57/46 . containing six-membered aromatic rings and other rings, e.g. cyclohexylphenylacetic acid
C07C 57/48 . . having unsaturation outside the aromatic rings
C07C 57/50 . . containing condensed ring systems

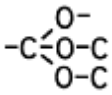
C07C 57/52 . containing halogen
C07C 57/54 . . Halogenated acrylic or methacrylic acids
C07C 57/56 . . containing rings other than six-membered aromatic rings
C07C 57/58 . . containing six-membered aromatic rings
C07C 57/60 . . . having unsaturation outside the rings
C07C 57/62 . . containing six-membered aromatic rings and other rings

C07C 57/64 . Acyl halides
C07C 57/66 . . with only carbon-to-carbon double bonds as unsaturation
C07C 57/68 . . with only caron-to-carbon triple bonds as unsaturation
C07C 57/70 . . containing rings other than six-membered aromatic rings

C07C 57/72 . . containing six-membered aromatic rings

C07C 57/74 . . containing six-membered aromatic rings and other rings

C07C 57/76 . . containing halogen outside the carbonyl halide group

C07C 59/00 Compounds having carboxyl groups bound to acyclic carbon atoms and containing any of the groups OH, O-metal, -CHO, keto, ether,  groups,  groups, or  groups

C07C 59/01 . Saturated compounds having only one carboxyl group and containing hydroxy or O-metal groups

C07C 59/06 . . Glycolic acid

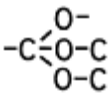
C07C 59/08 . . Lactic acid

C07C 59/10 . . Polyhydroxy carboxylic acids

C07C 59/105 . . . having five or more carbon atoms, e.g. aldonic acids

C07C 59/11 . . containing rings

C07C 59/115 . . containing halogen

C07C 59/125 . Saturated compounds having only one carboxyl group and containing ether groups,  groups,  groups, or  groups

C07C 59/13 . . containing rings

C07C 59/135 . . containing halogen

C07C 59/147 . Saturated compounds having only one carboxyl group and containing -CHO groups

C07C 59/153 . . Glyoxylic acid

C07C 59/185 . Saturated compounds having only one carboxyl group and containing keto groups

C07C 59/19 . . Pyruvic acid

C07C 59/195 . . Acetoacetic acid

C07C 59/205 . . containing rings

C07C 59/21 . . containing halogen

C07C 59/215 . . containing singly bound oxygen containing groups

C07C 59/225 . . containing -CHO groups

C07C 59/235 . Saturated compounds containing more than one carboxyl group

C07C 59/245 . . containing hydroxy or O-metal groups

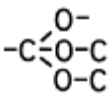
C07C 59/255 . . . Tartaric acid

C07C 59/265 . . . Citric acid

C07C 59/285 . . . Polyhydroxy dicarboxylic acids having five or more carbon atoms, e.g. saccharic acids

C07C 59/29 . . . containing rings

C07C 59/295 . . . containing halogen

C07C 59/305 .. containing ether groups,  groups,  groups, or  groups

C07C 59/31 ... containing rings

C07C 59/315 ... containing halogen

C07C 59/325 .. containing -CHO groups

C07C 59/347 .. containing keto groups

C07C 59/353 ... containing rings

C07C 59/40 . Unsaturated compounds

C07C 59/42 .. containing hydroxy or O-metal groups

C07C 59/44 ... Ricinoleic acid

C07C 59/46 ... containing rings other than six-membered aromatic rings

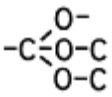
C07C 59/48 ... containing six-membered aromatic rings

C07C 59/50 .... Mandelic acid

C07C 59/52 ... a hydroxy or O-metal group being bound to a carbon atom of a six-membered aromatic ring

C07C 59/54 ... containing six-membered aromatic rings and other rings

C07C 59/56 ... containing halogen

C07C 59/58 .. containing ether groups,  groups,  groups, or  groups

C07C 59/60 ... the non-carboxylic part of the ether being unsaturated

C07C 59/62 ... containing rings other than six-membered aromatic rings

C07C 59/64 ... containing six-membered aromatic rings

C07C 59/66 .... the non-carboxylic part of the ether containing six-membered aromatic rings

C07C 59/68 ..... the oxygen atom of the ether group being bound to a non-condensed six-membered aromatic ring

C07C 59/70 ..... Ethers of hydroxy-acetic acid, {e.g. substitutes on the ring }

C07C 59/72 ... containing six-membered aromatic rings and other rings

C07C 59/74 .. containing -CHO groups

C07C 59/76 .. containing keto groups

C07C 59/80 ... containing rings other than six-membered aromatic rings

C07C 59/82 .... the keto group being part of a ring

C07C 59/84 ... containing six membered aromatic rings

C07C 59/86 ... containing six-membered aromatic rings and other rings

C07C 59/88 ... containing halogen

C07C 59/90 ... containing singly bound oxygen-containing groups

C07C 59/92 ... containing -CHO groups

C07C 61/00 **Compounds having carboxyl groups bound to carbon atoms of rings other than six-membered aromatic rings**

NOTE

The oxidation mixture of naphthenes containing naphthenic acids, is classified in C07C 61/005

C07C 61/005 . Naphthenic acids

C07C 61/04 . Saturated compounds having a carboxyl group bound to a three or four-membered ring

C07C 61/06 . Saturated compounds having a carboxyl group bound to a five-membered ring

C07C 61/08 . Saturated compounds having a carboxyl group bound to a six-membered ring

C07C 61/09 . . Completely hydrogenated benzenedicarboxylic acids

C07C 61/10 . Saturated compounds having a carboxyl group bound to a seven-to-twelve-membered ring

C07C 61/12 . Saturated polycyclic compounds

C07C 61/125 . . having a carboxyl group bound to a condensed ring system

C07C 61/13 . . . having two rings

C07C 61/135 . . . having three rings

C07C 61/15 . Saturated compounds containing halogen

C07C 61/16 . Unsaturated compounds

C07C 61/20 . . having a carboxyl group bound to a five-membered ring

C07C 61/22 . . having a carboxyl group bound to a six-membered ring

C07C 61/24 . . . Partially hydrogenated benzenedicarboxylic acids

C07C 61/26 . . having a carboxyl group bound to a seven-to-twelve-membered ring

C07C 61/28 . . polycyclic

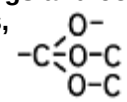
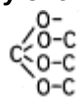
C07C 61/29 . . . having a carboxyl group bound to a condensed ring system

C07C 61/35 . . having unsaturation outside the rings

C07C 61/37 . . Chrysanthemumic acid

C07C 61/39 . . containing six-membered aromatic rings

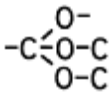
C07C 61/40 . . containing halogen

C07C 62/00 Compounds having carboxyl groups bound to carbon atoms of rings other than six-membered aromatic rings and containing any of the groups OH, O-metal, -CHO, keto, ether,  groups,  groups, or  groups

C07C 62/02 . Saturated compounds containing hydroxy or O-metal groups

C07C 62/04 . . with a six-membered ring

C07C 62/06 . . polycyclic

C07C 62/08 . Saturated compounds containing ether groups,  groups,  groups, or  groups

C07C 62/10 . . with a six-membered ring

C07C 62/12 . . polycyclic

C07C 62/14 . . . having a carboxyl group on a condensed ring system

C07C 62/16 . Saturated compounds containing -CHO groups

C07C 62/18 . Saturated compounds containing keto groups

C07C 62/20 . . with a {saturated } six-membered ring

C07C 62/22 . . polycyclic

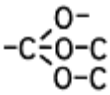
C07C 62/24 . . the keto group being part of a ring

C07C 62/26 . . containing singly bound oxygen-containing groups

C07C 62/28 . . containing -CHO groups

C07C 62/30 . Unsaturated compounds

C07C 62/32 . . containing hydroxy or O-metal groups

C07C 62/34 . . containing ether groups,  groups,  groups, or  groups

C07C 62/36 . . containing -CHO groups

C07C 62/38 . . containing keto groups

C07C 63/00 Compounds having carboxyl groups bound to a carbon atom of six-membered aromatic rings

C07C 63/04 . Monocyclic monocarboxylic acids

C07C 63/06 . . Benzoic acid

C07C 63/08 . . . Salts thereof

C07C 63/10 . . . Halides thereof

C07C 63/14 . Monocyclic dicarboxylic acids

C07C 63/15 . . all carboxyl groups bound to carbon atoms of the six-membered aromatic ring

C07C 63/16 . . . 1,2 - Benzenedicarboxylic acid

C07C 63/20 . . . . Salts thereof

C07C 63/22 . . . . Halides thereof

C07C 63/24 . . . 1,3 - Benzenedicarboxylic acid

C07C 63/26 . . . 1,4 - Benzenedicarboxylic acid

C07C 63/28 . . . . Salts thereof

C07C 63/30 . . . . Halides thereof

C07C 63/307 . Monocyclic tricarboxylic acids

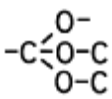
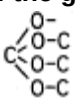
C07C 63/313 . Monocyclic acids containing more than three carboxyl groups

C07C 63/33 . Polycyclic acids
C07C 63/331 . . with all carboxyl groups bound to non-condensed rings
C07C 63/333 . . . 4,4` - Diphenyldicarboxylic acids
C07C 63/337 . . with carboxyl groups bound to condensed ring systems
C07C 63/34 . . . containing two {condensed } rings
C07C 63/36 . . . . containing one carboxyl group
C07C 63/38 . . . . containig two carboxyl groups both bound to carbon atoms of the condensed ring system
C07C 63/40 . . . . containing three or more carboxyl groups all bound to carbon atoms of the condensed ring system
C07C 63/42 . . . containing three or more {condensed } rings
C07C 63/44 . . . . containing one carboxyl group
C07C 63/46 . . . . containing two carboxyl groups both bound to carbon atoms of the condensed ring system
C07C 63/48 . . . . containing three or more carboxyl groups all bound to carbon atoms of the condensed ring system
C07C 63/49 . . containing rings other than six-membered aromatic rings

C07C 63/64 . Monocyclic acids with unsaturation outside the aromatic ring

C07C 63/66 . Polycyclic acids with unsaturation outside the aromatic ring

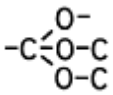
C07C 63/68 . containing halogen
C07C 63/70 . . Monocarboxylic acids
C07C 63/72 . . Polycyclic acids
C07C 63/74 . . . having unsaturation outside the aromatic rings

C07C 65/00 **Compounds having carboxyl groups bound to carbon atoms of six-membered aromatic rings and containing any of the groups OH, O-metal, -CHO, keto, ether,**  **groups,**  **groups, or**  **groups** (cyclic anhydrides C07D)

C07C 65/01 . containing hydroxy or O-metal groups
C07C 65/03 . . monocyclic and having all hydroxy or O-metal groups bound to the ring
C07C 65/05 . . . o-Hydrocy carboxylic acids
C07C 65/10 . . . . Salicylic acid
C07C 65/105 . . polycyclic
C07C 65/11 . . . with carboxyl groups on a condensed ring system containing two rings
C07C 65/15 . . . with carboxyl groups on a condensed ring system containing more than two rings

C07C 65/17 . . containing rings other than six-membered aromatic rings

C07C 65/19 . . having unsaturation outside the aromatic ring

C07C 65/21 . containing ether groups,  groups,  groups, or  groups

C07C 65/24 . . polycyclic

C07C 65/26 . . . containing rings other than six-membered aromatic rings

C07C 65/28 . . having unsaturation outside the aromatic rings

C07C 65/30 . containing -CHO groups

C07C 65/32 . containing keto groups

C07C 65/34 . . polycyclic

C07C 65/36 . . . containing rings other than six-membered aromatic rings

C07C 65/38 . . having unsaturation outside the aromatic rings

C07C 65/40 . . containing singly bound oxygen-containing groups

C07C 65/42 . . containing -CHO groups

C07C 66/00 Quinone carboxylic acids

C07C 66/02 . Anthraquinone carboxylic acids

C07C 67/00 Preparation of carboxylic acid esters

C07C 67/02 . by interreacting ester groups, i.e. transesterification

C07C 67/03 . by reacting an ester group with a hydroxy group

C07C 67/035 . by reacting carboxylic acids or symmetrical anhydrides with saturated hydrocarbons

C07C 67/04 . by reacting carboxylic acids or symmetrical anhydrides onto unsaturated carbon-to-carbon bonds

C07C 67/05 . . with oxidation

C07C 67/055 . . . in the presence of platinum group metals or their compounds

C07C 67/08 . by reacting carboxylic acids or symmetrical anhydrides with the hydroxy or O-metal group of organic compounds

C07C 67/10 . by reacting carboxylic acids or symmetrical anhydrides with ester groups or with a carbon-halogen bond (preparation from carboxylic acid halides C07C 67/14)

C07C 67/11 . . being mineral ester groups

C07C 67/12 . from unsymmetrical anhydrides

C07C 67/14 . from carboxylic acid halides

C07C 67/16 . form carboxylic acids, esters or anhydrides wherein one oxygen atom has been replaced by a sulfur, selenium or tellurium atom

C07C 67/18 . by conversion of a group containing nitrogen into an ester group

C07C 67/20 . . from amides or lactams

C07C 67/22 . . from nitriles

C07C 67/24 . by reacting carboxylic acids or derivatives thereof with a carbon-to-oxygen ether bond, e.g. acetal, tetrahydrofuran

C07C 67/26 . . with an oxirane ring

C07C 67/27 . from ortho-esters

C07C 67/28 . by modifying the hydroxylic moiety of the ester, such modification not being an introduction of an ester group

C07C 67/283 . . by hydrogenation of unsaturated carbon-to-carbon bonds

C07C 67/287 . . by introduction of halogen
by substitution of halogen atoms by other halogen atoms

C07C 67/29 . . by introduction of oxygen-containing functional groups

C07C 67/293 . . by isomerisation
by change of size of the carbon skeleton

C07C 67/297 . . by splitting-off hydrogen or functional groups
by hydrogenolysis of functional groups

C07C 67/30 . by modifying the acid moiety of the ester, such modification not being an introduction of an ester group

C07C 67/303 . . by hydrogenation of unsaturated carbon-to-carbon bonds

C07C 67/307 . . by introduction of halogen
by substitution of halogen atoms by other halogen atoms

C07C 67/31 . . by introduction of functional groups containing oxygen only in singly bound form

C07C 67/313 . . by introduction of doubly bound oxygen containing functional groups, e.g. carboxyl groups

C07C 67/317 . . by splitting-off hydrogen or functional groups
by hydrogenolysis of functional groups

C07C 67/32 . . . Decarboxylation

C07C 67/327 . . . by elimination of functional groups containing oxygen only in singly bound form

C07C 67/333 . . by isomerisation
by change of size of the carbon skeleton (introduction or elimination of carboxyl groups C07C 67/313, C07C 67/32)

C07C 67/34 . . . Migration of  groups in the molecule

C07C 67/343 . . . by increase in the number of carbon atoms

C07C 67/347 . . . . by addition to unsaturated carbon-to-carbon bonds

C07C 67/36 . by reaction with carbon monoxide or formates (C07C 67/02, C07C 67/03, C07C 67/10 take precedence)

C07C 67/37 . . by reaction of ethers with carbon monoxide

C07C 67/38 . . by addition to an unsaturated carbon-to-carbon bond

C07C 67/39 . by oxidation of groups which are precursors for the acid moiety of the ester

C07C 67/40 . . by oxidation of primary alcohols

C07C 67/42 . . by oxidation of secondary alcohols or ketones

C07C 67/44 . by oxidation-reduction of aldehydes, e.g. Tishchenko reaction

C07C 67/46 . from ketenes or polyketenes

C07C 67/465 . by oligomerisation

C07C 67/47 . by telomerisation (macromolecular compounds C08)

C07C 67/475 . by splitting of carbon-to-carbon bonds and redistribution, e.g. disproportionation or migration of  groups between different molecules

C07C 67/48 . Separation
Purification
Stabilisation
Use of additives

C07C 67/52 . . by change in the physical state, e.g. crystallisation

C07C 67/54 . . . by distillation

C07C 67/56 . . by solid-liquid treatment
by chemisorption

C07C 67/58 . . by liquid-liquid treatment

C07C 67/60 . . by treatment giving rise to chemical modification (by chemisorption C07C 67/56)

C07C 67/62 . . Use of additives, e.g. for stabilisation

C07C 68/00 **Preparation of esters of carbonic or haloformic acids**

C07C 68/005 . {from carbon monoxide and oxygen }

C07C 68/02 . from phosgene or haloformates

C07C 68/04 . from carbon dioxide or inorganic carbonates

C07C 68/06 . from organic carbonates

C07C 68/065 . . {from alkylene carbonates }

C07C 68/08 . Purification
Separation
Stabilisation

C07C 69/00 **Esters of carboxylic acids**
Esters of carbonic or haloformic acids (ortho esters, see the relevant groups, e.g. C07C 43/32)

NOTE

In this group esters having a variably-specified acid moiety, i.e. covered by more than one of groups C07C 69/02, C07C 69/34, C07C 69/52, C07C 69/608, C07C 69/612, C07C 69/62, C07C 69/66, C07C 69/74, C07C 69/76, C07C 69/95, C07C 69/96, are covered by groups C07C 69/003 to C07C 69/017 according to their hydroxylic moiety

C07C 69/003 . Esters of saturated alcohols having the esterified hydroxy group bound to an acyclic carbon atom

C07C 69/007 . Esters of unsaturated alcohols having the esterified hydroxy group bound to an acyclic carbon atom

C07C 69/01 . . Vinyl esters

C07C 69/013 . Esters of alcohols having the esterified hydroxy group bound to a carbon atom of a ring other than a six-membered aromatic ring

C07C 69/017 . Esters of hydroxy compounds having the esterified hydroxy group bound to a carbon atom of a six-membered aromatic ring

C07C 69/02 . Esters of acyclic saturated monocarboxylic acids having the carboxyl group bound to an acyclic carbon atom or to hydrogen

C07C 69/04 . . Formic acid esters

C07C 69/06 . . . of monohydroxylic compounds

C07C 69/07 . . . . of unsaturated alcohols

C07C 69/08 . . . of dihydroxylic compounds

C07C 69/10 . . . of trihydroxylic compounds

C07C 69/12 . . Acetic acid esters

C07C 69/14 . . . of monohydroxylic compounds

C07C 69/145 . . . . of unsaturated alcohols

C07C 69/15 . . . . . Vinyl acetate

C07C 69/155 . . . . . Allyl acetate

C07C 69/157 . . . . . containing six-membered aromatic rings

C07C 69/16 . . . of dihydroxylic compounds

C07C 69/18 . . . of trihydroxylic compounds

C07C 69/21 . . . of hydroxy compounds with more than three hydroxy groups (esters of sugars C07H)

C07C 69/22 . . having three or more carbon atoms in the acid moiety

C07C 69/24 . . . esterified with monohydroxylic compounds

C07C 69/26 . . . . Synthetic waxes

C07C 69/28 . . . esterified with dihydroxylic compounds

C07C 69/30 . . . esterified with trihydroxylic compounds (fats, oils C11B , C11C)

C07C 69/33 . . . esterified with hydroxy compounds having more than three hydroxy groups (esters of sugars C07H)

C07C 69/34 . Esters of acyclic saturated polycarboxylic acids having an esterified carboxyl group

bound to an acyclic carbon atom

C07C 69/36 . . Oxalic acid esters

C07C 69/38 . . Malonic acid esters

C07C 69/40 . . Succinic acid esters

C07C 69/42 . . Glutaric acid esters

C07C 69/44 . . Adipic acid esters

C07C 69/46 . . Pimelic acid esters

C07C 69/48 . . Azelaic acid esters

C07C 69/50 . . Sebacic acid esters

C07C 69/52 . Esters of acyclic unsaturated carboxylic acids having the esterified carboxyl group bound to an acyclic carbon atom

C07C 69/533 . . Monocarboxylic acid esters having only one carbon-to-carbon double bond

C07C 69/54 . . . Acrylic acid esters
Methacrylic acid esters

C07C 69/56 . . . Crotonic acid esters
Vinyl acetic acid esters

C07C 69/58 . . . Esters of straight chain acids with eighteen carbon atoms in the acid moiety

C07C 69/587 . . Monocarboxylic acid esters having at least two carbon-to-carbon double bonds

C07C 69/593 . . Dicarboxylic acid esters having only one carbon-to-carbon double bond

C07C 69/60 . . . Maleic acid esters
Fumaric acid esters

C07C 69/602 . . Dicarboxylic acid esters having at least two carbon-to-carbon double bonds

C07C 69/604 . . Polycarboxylic acid esters, the acid moiety containing more than two carboxyl groups

C07C 69/606 . . having only {or additionally } carbon-to-carbon triple bonds as unsaturation in the carboxylic acid moiety

C07C 69/608 . Esters of carboxylic acids having a carboxyl group bound to an acyclic carbon atom and having a ring other than a six-membered aromatic ring in the acid moiety

C07C 69/612 . Esters of carboxylic acids having a carboxyl group bound to an acyclic carbon atom and having a six-membered aromatic ring in the acid moiety

C07C 69/614 . . of phenylacetic acid

C07C 69/616 . . polycyclic

C07C 69/618 . . having unsaturation outside the six-membered aromatic ring

C07C 69/62 . Halogen-containing esters (haloformic acid esters C07C 69/96)

C07C 69/63 . . of saturated acids

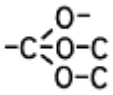
C07C 69/635 . . . containing rings in the acid moiety

C07C 69/65 . . of unsaturated acids

C07C 69/653 . . . Acrylic acid esters
Methacrylic acid esters
Haloacrylic acid esters
Halomethacrylic acid esters

C07C 69/657 . . . Maleic acid esters

Fumaric acid esters
Halomaleic acid esters
Halofumaric acid esters

C07C 69/66 . Esters of carboxylic acids having esterified carboxylic groups bound to acyclic carbon atoms and having any of the groups OH, O-metal, -CHO, keto, ether, acyloxy,  groups,  groups, or  in the acid moiety

C07C 69/67 . . of saturated acids

C07C 69/675 . . . of saturated hydroxy-carboxylic acids

C07C 69/68 . . . . Lactic acid esters

C07C 69/70 . . . . Tartaric acid esters

C07C 69/704 . . . . Citric acid esters

C07C 69/708 . . . Ethers

C07C 69/712 . . . . the hydroxy group of the ester being etherified with a hydroxy compound having the hydroxy group bound to a carbon atom of a six-membered aromatic ring

C07C 69/716 . . . Esters of keto-carboxylic acids {or aldehydo-carboxylic acids }

C07C 69/72 . . . . Acetoacetic acid esters

C07C 69/73 . . of unsaturated acids

C07C 69/732 . . . of unsaturated hydroxy carboxylic acids

C07C 69/734 . . . Ethers

C07C 69/736 . . . . the hydroxy group of the ester being etherified with a hydroxy compound having the hydroxy group bound to a carbon atom of a six-membered aromatic ring

C07C 69/738 . . . Esters of keto-carboxylic acids {or aldehydo-carboxylic acids }

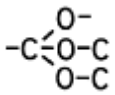
C07C 69/74 . Esters of carboxylic acids having an esterified carboxyl group bound to a carbon atom of a ring other than a six-membered aromatic ring

C07C 69/743 . . of acids with a three-membered ring and with unsaturation outside the ring

C07C 69/747 . . . Chrysanthemumic acid esters

C07C 69/75 . . of acids with a six-membered ring

C07C 69/753 . . of polycyclic acids

C07C 69/757 . . having any of the groups OH, O-metal, -CHO, keto, ether, acyloxy,  groups,  groups, or  in the acid moiety

C07C 69/76 . Esters of carboxylic acids having a carboxyl group bound to a carbon atom of a six-membered aromatic ring

C07C 69/78 . . Benzoic acid esters

C07C 69/80 . . Phthalic acid esters

C07C 69/82 . . . Terephthalic acid esters

C07C 69/84 . . of monocyclic hydroxy carboxylic acids, the hydroxy groups and the carboxyl groups of which are bound to carbon atoms of a six-membered aromatic ring

C07C 69/86 . . . with esterified hydroxyl groups

C07C 69/88 . . . with esterified carboxyl groups

C07C 69/90 . . . with esterified hydroxyl and carboxyl groups

C07C 69/92 . . . with etherified hydroxyl groups

C07C 69/94 . . of polycyclic hydroxy carboxylic acids, the hydroxy groups and the carboxyl groups of which are bound to carbon atoms of six-membered aromatic rings

C07C 69/95 . Esters of quinone carboxylic acids

C07C 69/96 . Esters of carbonic or haloformic acids

C07C 71/00 Esters of oxyacids of halogens

Guide heading: **Compounds containing carbon and nitrogen with or without hydrogen, halogens or oxygen** (irradiation products of cholesterol or its derivatives C07C 401/00; vitamin D derivatives, 9,10-seco cyclopenta[a]phenanthrene or analogues obtained by chemical preparation without irradiation C07C 401/00; derivatives of cyclohexane or of a cyclohexene { or of cyclohexadiene }, having a side-chain containing an acyclic unsaturated part of at least four carbon atoms, this part being directly attached to the cyclohexane or cyclohexene { or cyclohexadiene } rings C07C 403/00; protaglandins or derivatives thereof C07C 405/00; peroxy compounds C07C 407/00, C07C 409/00)

C07C 201/00 Preparation of esters of nitric or nitrous acid or of compounds containing nitro or nitroso groups bound to a carbon skeleton

C07C 201/02 . Preparation of esters of nitric acid

C07C 201/04 . Preparation of esters of nitrous acid

C07C 201/06 . Preparation of nitro compounds

C07C 201/08 . . by substitution of hydrogen atoms by nitro groups

C07C 201/10 . . by substitution of functional groups by nitro groups

C07C 201/12 . . by reactions not involving the formation of nitro groups

C07C 201/14 . . by formation of nitro groups together with reactions not involving the formation of nitro groups

C07C 201/16 . . Separation
Purification
Stabilisation
Use of additives

C07C 203/00 Esters of nitric or nitrous acid

C07C 203/02 . Esters of nitric acid

C07C 203/04 . . having nitrate groups bound to acyclic carbon atoms

C07C 203/06 . . . Glycerol trinitrate

C07C 203/08 . . having nitrate groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 203/10 . . having nitrate groups bound to carbon atoms of six-membered aromatic rings

C07C 205/00 Compounds containing nitro groups bound to a carbon skeleton

C07C 205/01 . having nitro groups bound to acyclic carbon atoms
C07C 205/02 . . of a saturated carbon skeleton
C07C 205/03 . . of an unsaturated carbon skeleton
C07C 205/04 . . . containing six-membered aromatic rings

C07C 205/05 . having nitro groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 205/06 . having nitro groups bound to carbon atoms of six-membered aromatic rings

C07C 205/07 . the carbon skeleton being further substituted by halogen atoms
C07C 205/08 . . having nitro groups bound to acyclic carbon atoms
C07C 205/09 . . . of an unsaturated carbon skeleton
C07C 205/10 . . having nitro groups bound to carbon atoms of rings other than six-membered aromatic rings
C07C 205/11 . . having nitro groups bound to carbon atoms of six-membered aromatic rings
C07C 205/12 . . . the six-membered aromatic ring or a condensed ring system containing that ring being substituted by halogen atoms

C07C 205/13 . the carbon skeleton being further substituted by hydroxy groups
C07C 205/14 . . having nitro groups and hydroxy groups bound to acyclic carbon atoms
C07C 205/15 . . . of a saturated carbon skeleton
C07C 205/16 . . . of a carbon skeleton containing six-membered aromatic rings
C07C 205/17 . . having nitro groups bound to acyclic carbon atoms and hydroxy groups bound to carbon atoms of six-membered aromatic rings
C07C 205/18 . . having nitro groups or hydroxy groups bound to carbon atoms of rings other than six-membered aromatic rings
C07C 205/19 . . having nitro groups bound to carbon atoms of six-membered aromatic rings and hydroxy groups bound to acyclic carbon atoms
C07C 205/20 . . having nitro groups and hydroxy groups bound to carbon atoms of six-membered aromatic rings
C07C 205/21 . . . having nitro groups and hydroxy groups bound to carbon atoms of the same non-condensed six-membered aromatic ring
C07C 205/22 . . . . having one nitro groups bound to the ring
C07C 205/23 . . . . having two nitro groups bound to the ring
C07C 205/24 . . . . having three, and only three, nitro groups bound to the ring
C07C 205/25 . . . having nitro groups bound to carbon atoms of six-membered aromatic rings being part of a condensed ring system
C07C 205/26 . . and being further substituted by halogen atoms

C07C 205/27 . the carbon skeleton being further substituted by etherified hydroxy groups
C07C 205/28 . . having nitro groups and etherified hydroxy groups bound to acyclic carbon atoms of the carbon skeleton

C07C 205/29 . . . the carbon skeleton being saturated

C07C 205/30 . . . . the oxygen atom of at least one of the etherified hydroxy groups being further bound to a carbon atom of a six-membered aromatic ring

C07C 205/31 . . . the carbon skeleton containing six-membered aromatic rings

C07C 205/32 . . having nitro groups bound to acyclic carbon atoms and etherified hydroxy groups bound to carbon atoms of six-membered aromatic rings of the carbon skeleton

C07C 205/33 . . having nitro groups or etherified hydroxy groups bound to carbon atoms of rings other than six-membered aromatic rings of the carbon skeleton

C07C 205/34 . . having nitro groups bound to carbon atoms of six-membered aromatic rings and etherified hydroxy groups bound to acyclic carbon atoms of the carbon skeleton

C07C 205/35 . . having nitro groups and etherified hydroxy groups bound to carbon atoms of six-membered aromatic rings of the carbon skeleton

C07C 205/36 . . . to carbon atoms of the same non-condensed six-membered aromatic ring or to carbon atoms of six-membered aromatic rings being part of the same condensed ring system

C07C 205/37 . . . . the oxygen atom of at least one of the etherified hydroxy groups being further bound to an acyclic carbon atom

C07C 205/38 . . . . the oxygen atom of at least one of the etherified hydroxy groups being further bound to a carbon atom of a six-membered aromatic ring, e.g. nitrodiphenyl ethers

C07C 205/39 . the carbon skeleton being further substituted by esterified hydroxy groups

C07C 205/40 . . having nitro groups and esterified hydroxy groups bound to acyclic carbon atoms of the carbon skeleton

C07C 205/41 . . having nitro groups or esterified hydroxy groups bound to carbon atoms of rings other than six-membered aromatic rings of the carbon skeleton

C07C 205/42 . . having nitro groups or esterified hydroxy groups bound to carbon atoms of six-membered aromatic rings of the carbon skeleton

C07C 205/43 . . . to carbon atoms of the same non-condensed six-membered aromatic ring or to carbon atoms of six-membered aromatic rings being part of the same condensed ring system

C07C 205/44 . the carbon skeleton being further substituted by -CHO groups

C07C 205/45 . the carbon skeleton being further substituted by at least one doubly-bound oxygen atom, not being part of a -CHO group

C07C 205/46 . . the carbon skeleton containing carbon atoms of quinone rings

C07C 205/47 . . . Anthraquinones containing nitro groups

C07C 205/48 . . . . the carbon skeleton being further substituted by singly-bound oxygen atoms

C07C 205/49 . the carbon skeleton being further substituted by carboxyl groups

C07C 205/50 . . having nitro groups and carboxyl groups bound to acyclic carbon atoms of the carbon skeleton

C07C 205/51 . . . the carbon skeleton being saturated

C07C 205/52 . . . . Nitro-acetic acids

C07C 205/53 . . . the carbon skeleton containing six-membered aromatic rings

C07C 205/54 . . having nitro groups bound to acyclic carbon atoms and carboxyl groups bound to carbon atoms of six-membered aromatic rings of the carbon skeleton

C07C 205/55 . . having nitro groups or carboxyl groups bound to carbon atoms of rings other than

six-membered aromatic rings of the carbon skeleton

C07C 205/56 . . having nitro groups bound to carbon atoms of six-membered aromatic rings and carboxyl groups bound to acyclic carbon atoms of the carbon skeleton

C07C 205/57 . . having nitro groups and carboxyl groups bound to carbon atoms of six-membered aromatic rings of the carbon skeleton

C07C 205/58 . . . the carbon skeleton being further substituted by halogen atoms

C07C 205/59 . . . the carbon skeleton being further substituted by singly-bound oxygen atoms

C07C 205/60 . . . . in ortho-position to the carboxyl group, e.g. nitro-salicylic acids

C07C 205/61 . . . the carbon skeleton being further substituted by doubly-bound oxygen atoms

C07C 207/00 Compounds containing nitroso groups bound to a carbon skeleton

C07C 207/02 . the carbon skeleton not being further substituted

C07C 207/04 . the carbon skeleton being further substituted by singly-bound oxygen atoms

C07C 209/00 Preparation of compounds containing amino groups bound to a carbon skeleton

C07C 209/02 . by substitution of hydrogen atoms by amino groups

C07C 209/04 . by substitution of functional groups by amino groups

C07C 209/06 . . by substitution of halogen atoms

C07C 209/08 . . . with formation of amino groups bound to acyclic carbon atoms or to carbon atoms of rings other than six-membered aromatic rings

C07C 209/10 . . . with formation of amino groups bound to carbon atoms of six-membered aromatic rings or from amines having nitrogen atoms bound to carbon atoms of six-membered aromatic rings

C07C 209/12 . . . with formation of quaternary ammonium compounds

C07C 209/14 . . by substitution of hydroxy groups or of etherified or esterified hydroxy groups

C07C 209/16 . . . with formation of amino groups bound to acyclic carbon atoms or to carbon atoms of rings other than six-membered aromatic rings

C07C 209/18 . . . with formation of amino groups bound to carbon atoms of six-membered aromatic rings or from amines having nitrogen atoms bound to carbon atoms of six-membered aromatic rings

C07C 209/20 . . . with formation of quaternary ammonium compounds

C07C 209/22 . . by substitution of other functional groups

C07C 209/24 . by reductive alkylation of ammonia, amines or compounds having groups reducible to amino groups, with carbonyl compounds

C07C 209/26 . . by reduction with hydrogen

C07C 209/28 . . by reduction with other reducing agents

C07C 209/30 . by reduction of nitrogen-to-oxygen or nitrogen-to-nitrogen bonds

C07C 209/32 . . by reduction of nitro groups

C07C 209/325 . . . {reduction by other means than indicated in C07C 209/34 or C07C 209/36 }

C07C 209/34 . . . by reduction of nitro groups bound to acyclic carbon atoms or to carbon atoms of rings other than six-membered aromatic rings {in presence of

hydrogen-containing gases and a catalyst }

C07C 209/36 . . . by reduction of nitro groups bound to carbon atoms of six-membered aromatic rings {in presence of hydrogen-containing gases and a catalyst }

C07C 209/365 . . . . {by reduction with preservation of halogen-atoms in compounds containing nitro groups and halogen atoms bound to the same carbon skeleton }

C07C 209/38 . . by reduction of nitroso groups

C07C 209/40 . . by reduction of hydroxylamino or oxyimino groups

C07C 209/42 . . by reduction of nitrogen-to-nitrogen bonds

C07C 209/44 . by reduction of carboxylic acids or esters thereof in presence of ammonia or amines, or by reduction of nitriles, carboxylic acid amides, imines or imino-ethers

C07C 209/46 . . by reduction of carboxylic acids or esters thereof in presence of ammonia or amines

C07C 209/48 . . by reduction of nitriles

C07C 209/50 . . by reduction of carboxylic acid amides

C07C 209/52 . . by reduction of imines or imino-ethers (C07C 209/24 takes precedence)

C07C 209/54 . by rearrangement reactions

C07C 209/56 . . from carboxylic acids involving a Hofmann, Curtius, Schmidt, or Lossen-type rearrangement

C07C 209/58 . . from or via amides

C07C 209/60 . by condensation or addition reactions, e.g. Mannich reaction, addition of ammonia or amines to alkenes or to alkynes or addition of compounds containing an active hydrogen atom to Schiff`s bases, quinone imines, or aziranes

C07C 209/62 . by cleaving carbon-to-nitrogen, sulfur-to-nitrogen, or phosphorus-to-nitrogen bonds, e.g. hydrolysis of amides, N-dealkylation of amines or quaternary ammonium compounds (C07C 209/24 takes precedence)

C07C 209/64 . by disproportionation

C07C 209/66 . from or via metallo-organic compounds

C07C 209/68 . from amines, by reactions not involving amino groups, e.g. reduction of unsaturated amines, aromatisation, or substitution of the carbon skeleton

C07C 209/70 . . by reduction of unsaturated amines

C07C 209/72 . . . by reduction of six-membered aromatic rings

C07C 209/74 . . by halogenation, hydrohalogenation, dehalogenation, or dehydrohalogenation

C07C 209/76 . . by nitration

C07C 209/78 . . from carbonyl compounds, e.g. from formaldehyde, and amines having amino groups bound to carbon atoms of six-membered aromatic rings, with formation of methylene-diarylamines

C07C 209/80 . by photochemical reactions
by using free radicals

C07C 209/82 . Purification
Separation
Stabilisation

Use of additives

C07C 209/84 . . Purification

C07C 209/86 . . Separation

C07C 209/88 . . . Separation of optical isomers

C07C 209/90 . . Stabilisation
Use of additives

C07C 211/00 Compounds containing amino groups bound to a carbon skeleton

C07C 211/01 . having amino groups bound to acyclic carbon atoms

C07C 211/02 . . of an acyclic saturated carbon skeleton

C07C 211/03 . . . Monoamines

C07C 211/04 . . . . Mono-, di- or tri-methylamine

C07C 211/05 . . . . Mono-, di- or tri-ethylamine

C07C 211/06 . . . . containing only n- or iso-propyl groups

C07C 211/07 . . . . containing one, two or three alkyl groups, each having the same number of carbon atoms in excess of three

C07C 211/08 . . . . containing alkyl groups having a different number of carbon atoms

C07C 211/09 . . . Diamines

C07C 211/10 . . . . Diaminoethanes

C07C 211/11 . . . . Diaminopropanes

C07C 211/12 . . . . 1,6-Diaminohexanes

C07C 211/13 . . . Amines containing three or more amino groups bound to the carbon skeleton

C07C 211/14 . . . Amines containing amino groups bound to at least two aminoalkyl groups, e.g. diethylenetriamines

C07C 211/15 . . . the carbon skeleton being further substituted by halogen atoms or by nitro or nitroso groups

C07C 211/16 . . of a saturated carbon skeleton containing rings other than six-membered aromatic rings

C07C 211/17 . . . containing only non-condensed rings

C07C 211/18 . . . containing at least two amino groups bound to the carbon skeleton

C07C 211/19 . . . containing condensed ring systems

C07C 211/20 . . of an acyclic unsaturated carbon skeleton

C07C 211/21 . . . Monoamines

C07C 211/22 . . . containing at least two amino groups bound to the carbon skeleton

C07C 211/23 . . . the carbon skeleton containing carbon-to-carbon triple bonds

C07C 211/24 . . . the carbon skeleton being further substituted by halogen atoms or by nitro or nitroso groups

C07C 211/25 . . of an unsaturated carbon skeleton containing rings other than six-membered aromatic rings

C07C 211/26 . . of an unsaturated carbon skeleton containing at least one six-membered aromatic ring

C07C 211/27 . . . having amino groups linked to the six-membered aromatic ring by saturated carbon chains

C07C 211/28 . . . having amino groups linked to the six-membered aromatic ring by unsaturated carbon chains

C07C 211/29 . . . the carbon skeleton being further substituted by halogen atoms or by nitro or nitroso groups

C07C 211/30 . . . the six-membered aromatic ring being part of a condensed ring system formed by two rings

C07C 211/31 . . . the six-membered aromatic ring being part of a condensed ring system formed by at least three rings

C07C 211/32 . . . . containing dibenzocycloheptane or dibenzocycloheptene ring systems or condensed derivatives thereof

C07C 211/33 . having amino groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 211/34 . . of a saturated carbon skeleton

C07C 211/35 . . . containing only non-condensed rings

C07C 211/36 . . . containing at least two amino groups bound to the carbon skeleton

C07C 211/37 . . . being further substituted by halogen atoms or by nitro or nitroso groups

C07C 211/38 . . . containing condensed ring systems

C07C 211/39 . . of an unsaturated carbon skeleton

C07C 211/40 . . . containing only non-condensed rings

C07C 211/41 . . . containing condensed ring systems

C07C 211/42 . . . . with six-membered aromatic rings being part of the condensed ring systems

C07C 211/43 . having amino groups bound to carbon atoms of six-membered aromatic rings of the carbon skeleton

C07C 211/44 . . having amino groups bound to only one six-membered aromatic ring

C07C 211/45 . . . Monoamines

C07C 211/46 . . . . Aniline

C07C 211/47 . . . . Toluidines
Homologues thereof

C07C 211/48 . . . . N-alkylated amines

C07C 211/49 . . . having at least two amino groups bound to the carbon skeleton

C07C 211/50 . . . . with at least two amino groups bound to carbon atoms of six-membered aromatic rings of the carbon skeleton

C07C 211/51 . . . . . Phenylenediamines

C07C 211/52 . . . the carbon skeleton being further substituted by halogen atoms or by nitro or nitroso groups

C07C 211/53 . . . having the nitrogen atom of at least one of the amino groups further bound to a hydrocarbon radical substituted by amino groups

C07C 211/54 . . having amino groups bound to two or three six-membered aromatic rings

C07C 211/55 . . . Diphenylamines

C07C 211/56 . . . the carbon skeleton being further substituted by halogen atoms or by nitro or nitroso groups

C07C 211/57 . . having amino groups bound to carbon atoms of six-membered aromatic rings being part of condensed ring systems of the carbon skeleton

C07C 211/58 . . . Naphthylamines
N-substituted derivatives thereof

C07C 211/59 . . . the carbon skeleton being further substituted by halogen atoms or by nitro or nitroso groups

C07C 211/60 . . . containing a ring other than a six-membered aromatic ring forming part of at least one of the condensed ring systems

C07C 211/61 . . . with at least one of the condensed ring systems formed by three or more rings

C07C 211/62 . Quaternary ammonium compounds

C07C 211/63 . . having quaternised nitrogen atoms bound to acyclic carbon atoms

C07C 211/64 . . having quaternised nitrogen atoms bound to carbon atoms of six-membered aromatic rings

C07C 211/65 . Metal complexes of amines

C07C 213/00 Preparation of compounds containing amino and hydroxy, amino and etherified hydroxy or amino and esterified hydroxy groups bound to the same carbon skeleton

C07C 213/02 . by reactions involving the formation of amino groups from compounds containing hydroxy groups or etherified or esterified hydroxy groups

C07C 213/04 . by reaction of ammonia or amines with olefin oxides or halohydrins

C07C 213/06 . from hydroxy amines by reactions involving the etherification or esterification of hydroxy groups

C07C 213/08 . by reactions not involving the formation of amino groups, hydroxy groups or etherified or esterified hydroxy groups

C07C 213/10 . Separation
Purification
Stabilisation
Use of additives

C07C 215/00 Compounds containing amino and hydroxy groups bound to the same carbon skeleton

C07C 215/02 . having hydroxy groups and amino groups bound to acyclic carbon atoms of the same carbon skeleton

C07C 215/04 . . the carbon skeleton being saturated

C07C 215/06 . . . and acyclic

C07C 215/08 . . . . with only one hydroxy group and one amino group bound to the carbon skeleton

C07C 215/10 . . . . with one amino group and at least two hydroxy groups bound to the carbon skeleton

C07C 215/12 . . . . the nitrogen atom of the amino group being further bound to hydrocarbon groups substituted by hydroxy groups

C07C 215/14 . . . . the nitrogen atom of the amino group being further bound to hydrocarbon groups substituted by amino groups

C07C 215/16 . . . . the nitrogen atom of the amino group being further bound to carbon atoms of six-membered aromatic rings

C07C 215/18 .... with hydroxy groups and at least two amino groups bound to the carbon skeleton

C07C 215/20 ... the carbon skeleton being saturated and containing rings

C07C 215/22 .. the carbon skeleton being unsaturated

C07C 215/24 ... and acyclic

C07C 215/26 ... and containing rings other than six-membered aromatic rings

C07C 215/28 ... and containing six-membered aromatic rings

C07C 215/30 .... containing hydroxy groups and carbon atoms of six-membered aromatic rings bound to the same carbon atom of the carbon skeleton

C07C 215/32 ..... containing hydroxy groups and carbon atoms of two six-membered aromatic rings bound to the same carbon atom of the carbon skeleton

C07C 215/34 .... containing hydroxy groups and carbon atoms of six-membered aromatic rings bound to the same carbon atom of the carbon skeleton and at least one hydroxy group bound to another carbon atom of the carbon skeleton

C07C 215/36 ..... 1-Aryl-2-amino-1,3-propane diols

C07C 215/38 .... with rings other than six-membered aromatic rings being part of the carbon skeleton

C07C 215/40 .. with quaternised nitrogen atoms bound to carbon atoms of the carbon skeleton

C07C 215/42 . having amino groups or hydroxy groups bound to carbon atoms of rings other than six-membered aromatic rings of the same carbon skeleton

C07C 215/44 .. bound to carbon atoms of the same ring or condensed ring system

C07C 215/46 . having hydroxy groups bound to carbon atoms of at least one six-membered aromatic ring and amino groups bound to acyclic carbon atoms or to carbon atoms of rings other than six-membered aromatic rings of the same carbon skeleton

C07C 215/48 .. with amino groups linked to the six-membered aromatic ring, or to the condensed ring system containing that ring, by carbon chains not further substituted by hydroxy groups

C07C 215/50 ... with amino groups and the six-membered aromatic ring, or the condensed ring system containing that ring, bound to the same carbon atom of the carbon chain

C07C 215/52 ... linked by carbon chains having two carbon atoms between the amino groups and the six-membered aromatic ring or the condensed ring system containing that ring

C07C 215/54 ... linked by carbon chains having at least three carbon atoms between the amino groups and the six-membered aromatic ring or the condensed ring system containing that ring

C07C 215/56 .. with amino groups linked to the six-membered aromatic ring, or to the condensed ring system containing that ring, by carbon chains further substituted by hydroxy groups

C07C 215/58 ... with hydroxy groups and the six-membered aromatic ring, or the condensed ring system containing that ring, bound to the same carbon atom of the carbon chain

C07C 215/60 .... the chain having two carbon atoms between the amino groups and the six-membered aromatic ring or the condensed ring system containing that ring

C07C 215/62 .... the chain having at least three carbon atoms between the amino groups and the six-membered aromatic ring or the condensed ring system containing that ring

C07C 215/64 .. with rings other than six-membered aromatic rings being part of the carbon skeleton

C07C 215/66 .. with quaternised amino groups bound to the carbon skeleton

C07C 215/68 . having amino groups bound to carbon atoms of six-membered aromatic rings and hydroxy groups bound to acyclic carbon atoms or to carbon atoms of rings other than six-membered aromatic rings of the same carbon skeleton

C07C 215/70 .. with rings other than six-membered aromatic rings being part of the carbon skeleton

C07C 215/72 .. with quaternised amino groups bound to the carbon skeleton

C07C 215/74 . having hydroxy groups and amino groups bound to carbon atoms of six-membered aromatic rings of the same carbon skeleton

C07C 215/76 .. of the same non-condensed six-membered aromatic ring

C07C 215/78 ... containing at least two hydroxy groups bound to the carbon skeleton

C07C 215/80 ... containing at least two amino groups bound to the carbon skeleton

C07C 215/82 ... having the nitrogen atom of at least one of the amino groups further bound to a carbon atom of another six-membered aromatic ring

C07C 215/84 .. having amino groups bound to carbon atoms of six-membered aromatic rings being part of condensed ring systems

C07C 215/86 ... being formed by two rings

C07C 215/88 ... being formed by at least three rings

C07C 215/90 .. with quaternised amino groups bound to the carbon skeleton

C07C 217/00 Compounds containing amino and etherified hydroxy groups bound to the same carbon skeleton

C07C 217/02 . having etherified hydroxy groups and amino groups bound to acyclic carbon atoms of the same carbon skeleton

C07C 217/04 .. the carbon skeleton being acyclic and saturated

C07C 217/06 ... having only one etherified hydroxy group and one amino group bound to the carbon skeleton, which is not further substituted

C07C 217/08 .... the oxygen atom of the etherified hydroxy group being further bound to an acyclic carbon atom

C07C 217/10 ..... to an acyclic carbon atom of a hydrocarbon radical containing six-membered aromatic rings

C07C 217/12 .... the oxygen atom of the etherified hydroxy group being further bound to a carbon atom of a ring other than a six-membered aromatic ring

C07C 217/14 .... the oxygen atom of the etherified hydroxy group being further bound to a carbon atom of a six-membered aromatic ring

C07C 217/16 ..... the six-membered aromatic ring or condensed ring system containing that ring not being further substituted

C07C 217/18 ..... the six-membered aromatic ring or condensed ring system containing that ring being further substituted

C07C 217/20 ..... by halogen atoms, by trihalomethyl, nitro or nitroso groups, or by singly-bound oxygen atoms

C07C 217/22 ..... by carbon atoms having at least two bonds to oxygen atoms

C07C 217/24 ..... the six-membered aromatic ring being part of a condensed ring system containing rings other than six-membered aromatic rings

C07C 217/26 ... having only one etherified hydroxy group and one amino group bound to the

carbon skeleton, which is further substituted by halogen atoms or by nitro or nitroso groups

C07C 217/28 . . . having one amino group and at least two singly-bound oxygen atoms, with at least one being part of an etherified hydroxy group, bound to the carbon skeleton, e.g. ethers of polyhydroxy amines

C07C 217/30 . . . . having the oxygen atom of at least one of the etherified hydroxy groups further bound to a carbon atom of a six-membered aromatic ring

C07C 217/32 . . . . . the six-membered aromatic ring or condensed ring system containing that ring being further substituted

C07C 217/34 . . . . . by halogen atoms, by trihalomethyl, nitro or nitroso groups, or by singly-bound oxygen atoms

C07C 217/36 . . . . . by carbon atoms having at least two bonds to oxygen atoms

C07C 217/38 . . . . . the six-membered aromatic ring being part of a condensed ring system containing rings other than six-membered aromatic rings

C07C 217/40 . . . . having at least two singly-bound oxygen atoms, with at least one being part of an etherified hydroxy group, bound to the same carbon atom of the carbon skeleton, e.g. amino-ketals, ortho esters

C07C 217/42 . . . having etherified hydroxy groups and at least two amino groups bound to the carbon skeleton

C07C 217/44 . . the carbon skeleton being saturated and containing rings

C07C 217/46 . . the carbon skeleton being acyclic and unsaturated

C07C 217/48 . . the carbon skeleton being unsaturated and containing rings

C07C 217/50 . . Ethers of hydroxy amines of undetermined structure, e.g. obtained by reactions of epoxides with hydroxy amines

C07C 217/52 . having etherified hydroxy groups or amino groups bound to carbon atoms of rings other than six-membered aromatic rings of the same carbon skeleton

C07C 217/54 . having etherified hydroxy groups bound to carbon atoms of at least one six-membered aromatic ring and amino groups bound to acyclic carbon atoms or to carbon atoms of rings other than six-membered aromatic rings of the same carbon skeleton

C07C 217/56 . . with amino groups linked to the six-membered aromatic ring, or to the condensed ring system containing that ring, by carbon chains not further substituted by singly-bound oxygen atoms

C07C 217/58 . . . with amino groups and the six-membered aromatic ring, or the condensed ring system containing that ring, bound to the same carbon atom of the carbon chain

C07C 217/60 . . . linked by carbon chains having two carbon atoms between the amino groups and the six-membered aromatic ring or the condensed ring system containing that ring

C07C 217/62 . . . linked by carbon chains having at least three carbon atoms between the amino groups and the six-membered aromatic ring or the condensed ring system containing that ring

C07C 217/64 . . with amino groups linked to the six-membered aromatic ring, or to the condensed ring system containing that ring, by carbon chains further substituted by singly-bound oxygen atoms

C07C 217/66 . . . with singly-bound oxygen atoms and six-membered aromatic rings bound to the same carbon atom of the carbon chain

C07C 217/68 . . . . with singly-bound oxygen atoms, six-membered aromatic rings and amino groups bound to the same carbon atom of the carbon chain

C07C 217/70 . . . . linked by carbon chains having two carbon atoms between the amino groups

and the six-membered aromatic ring or the condensed ring system containing that ring

C07C 217/72 . . . . linked by carbon chains having at least three carbon atoms between the amino groups and the six-membered aromatic ring or the condensed ring system containing that ring

C07C 217/74 . . with rings other than six-membered aromatic rings being part of the carbon skeleton

C07C 217/76 . having amino groups bound to carbon atoms of six-membered aromatic rings and etherified hydroxy groups bound to acyclic carbon atoms or to carbon atoms of rings other than six-membered aromatic rings of the same carbon skeleton

C07C 217/78 . having amino groups and etherified hydroxy groups bound to carbon atoms of six-membered aromatic rings of the same carbon skeleton

C07C 217/80 . . having amino groups and etherified hydroxy groups bound to carbon atoms of non-condensed six-membered aromatic rings

C07C 217/82 . . . of the same non-condensed six-membered aromatic ring

C07C 217/84 . . . . the oxygen atom of at least one of the etherified hydroxy groups being further bound to an acyclic carbon atom

C07C 217/86 . . . . . to an acyclic carbon atom of a hydrocarbon radical containing six-membered aromatic rings

C07C 217/88 . . . . the oxygen atom of at least one of the etherified hydroxy groups being further bound to a carbon atom of a ring other than a six-membered aromatic ring

C07C 217/90 . . . . the oxygen atom of at least one of the etherified hydroxy groups being further bound to a carbon atom of a six-membered aromatic ring, e.g. amino-diphenylethers

C07C 217/92 . . . . the nitrogen atom of at least one of the amino groups being further bound to a carbon atom of a six-membered aromatic ring

C07C 217/94 . . having amino groups bound to carbon atoms of six-membered aromatic rings being part of condensed ring systems and etherified hydroxy groups bound to carbon atoms of six-membered aromatic rings of the same carbon skeleton

C07C 219/00 Compounds containing amino and esterified hydroxy groups bound to the same carbon skeleton

C07C 219/02 . having esterified hydroxy groups and amino groups bound to acyclic carbon atoms of the same carbon skeleton

C07C 219/04 . . the carbon skeleton being acyclic and saturated

C07C 219/06 . . . having the hydroxy groups esterified by carboxylic acids having the esterifying carboxyl groups bound to hydrogen atoms or to acyclic carbon atoms of an acyclic saturated carbon skeleton

C07C 219/08 . . . having at least one of the hydroxy groups esterified by a carboxylic acid having the esterifying carboxyl group bound to an acyclic carbon atom of an acyclic unsaturated carbon skeleton

C07C 219/10 . . . having at least one of the hydroxy groups esterified by a carboxylic acid having the esterifying carboxyl group bound to an acyclic carbon atom of a carbon skeleton containing rings

C07C 219/12 . . . having at least one of the hydroxy groups esterified by a carboxylic acid having the esterifying carboxyl group bound to a carbon atom of a ring other than a six-membered aromatic ring

C07C 219/14 . . . having at least one of the hydroxy groups esterified by a carboxylic acid having the esterifying carboxyl group bound to a carbon atom of a six-membered aromatic ring

C07C 219/16 . . . having at least one of the hydroxy groups esterified by an inorganic acid or a derivative thereof

C07C 219/18 . . the carbon skeleton being saturated and containing rings

C07C 219/20 . . the carbon skeleton being unsaturated

C07C 219/22 . . . and containing six-membered aromatic rings

C07C 219/24 . having esterified hydroxy groups or amino groups bound to carbon atoms of rings other than six-membered aromatic rings of the same carbon skeleton

C07C 219/26 . having esterified hydroxy groups bound to carbon atoms of at least one six-membered aromatic ring and amino groups bound to acyclic carbon atoms or to carbon atoms of rings other than six-membered aromatic rings of the same carbon skeleton

C07C 219/28 . . having amino groups bound to acyclic carbon atoms of the carbon skeleton

C07C 219/30 . . . with amino groups linked to the six-membered aromatic ring, or to the condensed ring system containing that ring, by carbon chains further substituted by singly-bound oxygen atoms

C07C 219/32 . having amino groups bound to carbon atoms of six-membered aromatic rings and esterified hydroxy groups bound to acyclic carbon atoms or to carbon atoms of rings other than six-membered aromatic rings of the same carbon skeleton

C07C 219/34 . having amino groups and esterified hydroxy groups bound to carbon atoms of six-membered aromatic rings of the same carbon skeleton

C07C 221/00 Preparation of compounds containing amino groups and doubly-bound oxygen atoms bound to the same carbon skeleton

C07C 223/00 Compounds containing amino and -CHO groups bound to the same carbon skeleton

C07C 223/02 . having amino groups bound to acyclic carbon atoms of the carbon skeleton

C07C 223/04 . having amino groups bound to carbon atoms of rings other than six-membered aromatic rings of the carbon skeleton

C07C 223/06 . having amino groups bound to carbon atoms of six-membered aromatic rings of the carbon skeleton

C07C 225/00 Compounds containing amino groups and doubly-bound oxygen atoms bound to the same carbon skeleton, at least one of the doubly-bound oxygen atoms not being part of a -CHO group, e.g. amino ketones

C07C 225/02 . having amino groups bound to acyclic carbon atoms of the carbon skeleton

C07C 225/04 . . the carbon skeleton being saturated

C07C 225/06 . . . and acyclic

C07C 225/08 . . . and containing rings

C07C 225/10 .... with doubly-bound oxygen atoms bound to carbon atoms not being part of rings

C07C 225/12 .... with doubly-bound oxygen atoms bound to carbon atoms being part of rings

C07C 225/14 .. the carbon skeleton being unsaturated

C07C 225/16 ... and containing six-membered aromatic rings

C07C 225/18 .... the carbon skeleton containing also rings other than six-membered aromatic rings

C07C 225/20 . having amino groups bound to carbon atoms of rings other than six-membered aromatic rings of the carbon skeleton

C07C 225/22 . having amino groups bound to carbon atoms of six-membered aromatic rings of the carbon skeleton

C07C 225/24 . the carbon skeleton containing carbon atoms of quinone rings

C07C 225/26 .. having amino groups bound to carbon atoms of quinone rings or of condensed ring systems containing quinone rings

C07C 225/28 ... of non-condensed quinone rings

C07C 225/30 ... of condensed quinone ring systems formed by two rings

C07C 225/32 ... of condensed quinone ring systems formed by at least three rings

C07C 225/34 .... Amino anthraquinones

C07C 225/36 ..... the carbon skeleton being further substituted by singly-bound oxygen atoms

C07C 227/00 Preparation of compounds containing amino and carboxyl groups bound to the same carbon skeleton

C07C 227/02 . Formation of carboxyl groups in compounds containing amino groups, e.g. by oxidation of amino alcohols

C07C 227/04 . Formation of amino groups in compounds containing carboxyl groups

C07C 227/06 .. by addition or substitution reactions, without increasing the number of carbon atoms in the carbon skeleton of the acid

C07C 227/08 ... by reaction of ammonia or amines with acids containing functional groups

C07C 227/10 .. with simultaneously increasing the number of carbon atoms in the carbon skeleton

C07C 227/12 . Formation of amino and carboxyl groups

C07C 227/14 . from compounds containing already amino and carboxyl groups or derivatives thereof

C07C 227/16 .. by reactions not involving the amino or carboxyl groups

C07C 227/18 .. by reactions involving amino or carboxyl groups, e.g. hydrolysis of esters or amides, by formation of halides, salts or esters

C07C 227/20 ... by hydrolysis of N-acylated amino-acids or derivatives thereof, e.g. hydrolysis of carbamates

C07C 227/22 . from lactams, cyclic ketones or cyclic oximes, e.g. by reactions involving Beckmann rearrangement

C07C 227/24 . from hydantoins

C07C 227/26 . from compounds containing carboxyl groups by reaction with HCN, or a salt thereof, and amines, or from aminonitriles

C07C 227/28 . from natural products

C07C 227/30 . Preparation of optical isomers

C07C 227/32 .. by stereospecific synthesis

C07C 227/34 .. by separation of optical isomers

C07C 227/36 . Racemisation of optical isomers

C07C 227/38 . Separation
Purification
Stabilisation
Use of additives (separation of optical isomers C07C 227/34)

C07C 227/40 .. Separation
Purification

C07C 227/42 ... Crystallisation

C07C 227/44 .. Stabilisation
Use of additives

C07C 229/00 Compounds containing amino and carboxyl groups bound to the same carbon skeleton

C07C 229/02 . having amino and carboxyl groups bound to acyclic carbon atoms of the same carbon skeleton

C07C 229/04 .. the carbon skeleton being acyclic and saturated

C07C 229/06 ... having only one amino and one carboxyl group bound to the carbon skeleton

C07C 229/08 .... the nitrogen atom of the amino group being further bound to hydrogen atoms

C07C 229/10 .... the nitrogen atom of the amino group being further bound to acyclic carbon atoms or to carbon atoms of rings other than six-membered aromatic rings

C07C 229/12 ..... to carbon atoms of acyclic carbon skeletons

C07C 229/14 ..... to carbon atoms of carbon skeletons containing rings

C07C 229/16 ..... to carbon atoms of hydrocarbon radicals substituted by amino or carboxyl groups, e.g. ethylenediamine-tetra-acetic acid, iminodiacetic acids

C07C 229/18 .... the nitrogen atom of the amino group being further bound to carbon atoms of six-membered aromatic rings

C07C 229/20 ... the carbon skeleton being further substituted by halogen atoms or by nitro or nitroso groups

C07C 229/22 ... the carbon skeleton being further substituted by oxygen atoms

C07C 229/24 ... having more than one carboxyl group bound to the carbon skeleton, e.g. aspartic acid

C07C 229/26 ... having more than one amino group bound to the carbon skeleton, e.g. lysine

C07C 229/28 .. the carbon skeleton being saturated and containing rings

C07C 229/30 .. the carbon skeleton being acyclic and unsaturated

C07C 229/32 .. the carbon skeleton being unsaturated and containing rings other than six-membered aromatic rings

C07C 229/34 . . the carbon skeleton containing six-membered aromatic rings

C07C 229/36 . . . with at least one amino group and one carboxyl group bound to the same carbon atom of the carbon skeleton

C07C 229/38 . having amino groups bound to acyclic carbon atoms and carboxyl groups bound to carbon atoms of six-membered aromatic rings of the same carbon skeleton

C07C 229/40 . having amino groups bound to carbon atoms of at least one six-membered aromatic ring and carboxyl groups bound to acyclic carbon atoms of the same carbon skeleton

C07C 229/42 . . with carboxyl groups linked to the six-membered aromatic ring, or to the condensed ring system containing that ring, by saturated carbon chains

C07C 229/44 . . with carboxyl groups linked to the six-membered aromatic ring, or to the condensed ring system containing that ring, by unsaturated carbon chains

C07C 229/46 . having amino or carboxyl groups bound to carbon atoms of rings other than six-membered aromatic rings of the same carbon skeleton

C07C 229/48 . . with amino groups and carboxyl groups bound to carbon atoms of the same non-condensed ring

C07C 229/50 . . with amino groups and carboxyl groups bound to carbon atoms being part of the same condensed ring system

C07C 229/52 . having amino and carboxyl groups bound to carbon atoms of six-membered aromatic rings of the same carbon skeleton

C07C 229/54 . . with amino and carboxyl groups bound to carbon atoms of the same non-condensed six-membered aromatic ring

C07C 229/56 . . . with amino and carboxyl groups bound in ortho-position

C07C 229/58 . . . . having the nitrogen atom of at least one of the amino groups further bound to a carbon atom of a six-membered aromatic ring, e.g. N-phenyl-anthranilic acids

C07C 229/60 . . . with amino and carboxyl groups bound in meta- or para- positions

C07C 229/62 . . . with amino groups and at least two carboxyl groups bound to carbon atoms of the same six-membered aromatic ring

C07C 229/64 . . . the carbon skeleton being further substituted by singly-bound oxygen atoms

C07C 229/66 . . . the carbon skeleton being further substituted by doubly-bound oxygen atoms

C07C 229/68 . . with amino and carboxyl groups bound to carbon atoms of six-membered aromatic rings being part of the same condensed ring system

C07C 229/70 . . . the carbon skeleton being further substituted by singly-bound oxygen atoms

C07C 229/72 . . . the carbon skeleton being further substituted by doubly-bound oxygen atoms

C07C 229/74 . . . . the condensed ring system being formed by at least three rings, e.g. amino anthraquinone carboxylic acids

C07C 229/76 . Metal complexes of amino carboxylic acids

C07C 231/00 Preparation of carboxylic acid amides

C07C 231/02 . from carboxylic acids or from esters, anhydrides, or halides thereof by reaction with ammonia or amines

C07C 231/04 . from ketenes by reaction with ammonia or amines

C07C 231/06 . from nitriles by transformation of cyano groups into carboxamide groups

C07C 231/065 . . {By hydration using metals or metallic ions as catalyst }

C07C 231/08 . from amides by reaction at nitrogen atoms of carboxamide groups

C07C 231/10 . from compounds not provided for in groups C07C 231/02 to C07C 231/08

C07C 231/12 . by reactions not involving the formation of carboxamide groups

C07C 231/14 . by formation of carboxamide groups together with reactions not involving the carboxamide groups

C07C 231/16 . Preparation of optical isomers

C07C 231/18 . . by stereospecific synthesis

C07C 231/20 . . by separation of optical isomers

C07C 231/22 . Separation
Purification
Stabilisation
Use of additives (separation of optical isomers C07C 231/20)

C07C 231/24 . . Separation
Purification

C07C 233/00 Carboxylic acid amides

C07C 233/01 . having carbon atoms of carboxamide groups bound to hydrogen atoms or to acyclic carbon atoms

C07C 233/02 . . having nitrogen atoms of carboxamide groups bound to hydrogen atoms or to carbon atoms of unsubstituted hydrocarbon radicals

C07C 233/03 . . . with carbon atoms of carboxamide groups bound to hydrogen atoms

C07C 233/04 . . . with carbon atoms of carboxamide groups bound to acyclic carbon atoms of an acyclic saturated carbon skeleton

C07C 233/05 . . . . having the nitrogen atoms of the carboxamide groups bound to hydrogen atoms or to acyclic carbon atoms

C07C 233/06 . . . . having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a ring other than a six-membered aromatic ring

C07C 233/07 . . . . having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a six-membered aromatic ring

C07C 233/08 . . . with carbon atoms of carboxamide groups bound to acyclic carbon atoms of a saturated carbon skeleton containing rings

C07C 233/09 . . . with carbon atoms of carboxamide groups bound to carbon atoms of an acyclic unsaturated carbon skeleton

C07C 233/10 . . . with carbon atoms of carboxamide groups bound to carbon atoms of an unsaturated carbon skeleton containing rings other than six-membered aromatic rings

C07C 233/11 . . . with carbon atoms of carboxamide groups bound to carbon atoms of an unsaturated carbon skeleton containing six-membered aromatic rings

C07C 233/12 . . having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a hydrocarbon radical substituted by halogen atoms or by nitro or

nitroso groups

C07C 233/13 . . . with the substituted hydrocarbon radical bound to the nitrogen atom of the carboxamide group by an acyclic carbon atom

C07C 233/14 . . . with the substituted hydrocarbon radical bound to the nitrogen atom of the carboxamide group by a carbon atom of a ring other than a six-membered aromatic ring

C07C 233/15 . . . with the substituted hydrocarbon radical bound to the nitrogen atom of the carboxamide group by a carbon atom of a six-membered aromatic ring

C07C 233/16 . . having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a hydrocarbon radical substituted by singly-bound oxygen atoms

C07C 233/17 . . . with the substituted hydrocarbon radical bound to the nitrogen atom of the carboxamide group by an acyclic carbon atom

C07C 233/18 . . . . having the carbon atom of the carboxamide group bound to a hydrogen atom or to a carbon atom of an acyclic saturated carbon skeleton

C07C 233/19 . . . . having the carbon atom of the carboxamide group bound to an acyclic carbon atom of a saturated carbon skeleton containing rings

C07C 233/20 . . . . having the carbon atom of the carboxamide group bound to a carbon atom of an acyclic unsaturated carbon skeleton

C07C 233/21 . . . . having the carbon atom of the carboxamide group bound to an acyclic carbon atom of an unsaturated carbon skeleton containing rings other than six-membered aromatic rings

C07C 233/22 . . . . having the carbon atom of the carboxamide group bound to an acyclic carbon atom of a carbon skeleton containing six-membered aromatic rings

C07C 233/23 . . . with the substituted hydrocarbon radical bound to the nitrogen atom of the carboxamide group by a carbon atom of a ring other than a six-membered aromatic ring

C07C 233/24 . . . with the substituted hydrocarbon radical bound to the nitrogen atom of the carboxamide group by a carbon atom of a six-membered aromatic ring

C07C 233/25 . . . . having the carbon atom of the carboxamide group bound to a hydrogen atom or to a carbon atom of an acyclic saturated carbon skeleton

C07C 233/26 . . . . having the carbon atom of the carboxamide group bound to an acyclic carbon atom of a saturated carbon skeleton containing rings

C07C 233/27 . . . . having the carbon atom of the carboxamide group bound to a carbon atom of an acyclic unsaturated carbon skeleton

C07C 233/28 . . . . having the carbon atom of the carboxamide group bound to an acyclic carbon atom of an unsaturated carbon skeleton containing rings other than six-membered aromatic rings

C07C 233/29 . . . . having the carbon atom of the carboxamide group bound to an acyclic carbon atom of a carbon skeleton containing six-membered aromatic rings

C07C 233/30 . . having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a hydrocarbon radical substituted by doubly-bound oxygen atoms

C07C 233/31 . . . with the substituted hydrocarbon radical bound to the nitrogen atom of the carboxamide group by an acyclic carbon atom

C07C 233/32 . . . with the substituted hydrocarbon radical bound to the nitrogen atom of the carboxamide group by a carbon atom of a ring other than a six-membered aromatic ring

C07C 233/33 . . . with the substituted hydrocarbon radical bound to the nitrogen atom of the carboxamide group by a carbon atom of a six-membered aromatic ring

C07C 233/34 . . having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a hydrocarbon radical substituted by amino groups

C07C 233/35 . . . with the substituted hydrocarbon radical bound to the nitrogen atom of the carboxamide group by an acyclic carbon atom

C07C 233/36 . . . . having the carbon atom of the carboxamide group bound to a hydrogen atom or to a carbon atom of an acyclic saturated carbon skeleton

C07C 233/37 . . . . having the carbon atom of the carboxamide group bound to an acyclic carbon atom of a saturated carbon skeleton containing rings

C07C 233/38 . . . . having the carbon atom of the carboxamide group bound to a carbon atom of an acyclic unsaturated carbon skeleton

C07C 233/39 . . . . having the carbon atom of the carboxamide group bound to an acyclic carbon atom of an unsaturated carbon skeleton containing rings other than six-membered aromatic rings

C07C 233/40 . . . . having the carbon atom of the carboxamide group bound to an acyclic carbon atom of a carbon skeleton containing six-membered aromatic rings

C07C 233/41 . . . with the substituted hydrocarbon radical bound to the nitrogen atom of the carboxamide group by a carbon atom of a ring other than a six-membered aromatic ring

C07C 233/42 . . . with the substituted hydrocarbon radical bound to the nitrogen atom of the carboxamide group by a carbon atom of a six-membered aromatic ring

C07C 233/43 . . . . having the carbon atom of the carboxamide group bound to a hydrogen atom or to a carbon atom of a saturated carbon skeleton

C07C 233/44 . . . . having the carbon atom of the carboxamide group bound to a carbon atom of an unsaturated carbon skeleton

C07C 233/45 . . having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a hydrocarbon radical substituted by carboxyl groups

C07C 233/46 . . . with the substituted hydrocarbon radical bound to the nitrogen atom of the carboxamide group by an acyclic carbon atom

C07C 233/47 . . . . having the carbon atom of the carboxamide group bound to a hydrogen atom or to a carbon atom of an acyclic saturated carbon skeleton

C07C 233/48 . . . . having the carbon atom of the carboxamide group bound to an acyclic carbon atom of a saturated carbon skeleton containing rings

C07C 233/49 . . . . having the carbon atom of the carboxamide group bound to a carbon atom of an acyclic unsaturated carbon skeleton

C07C 233/50 . . . . having the carbon atom of the carboxamide group bound to an acyclic carbon atom of an unsaturated carbon skeleton containing rings other than six-membered aromatic rings

C07C 233/51 . . . . having the carbon atom of the carboxamide group bound to an acyclic carbon atom of a carbon skeleton containing six-membered aromatic rings

C07C 233/52 . . . with the substituted hydrocarbon radical bound to the nitrogen atom of the carboxamide group by a carbon atom of a ring other than a six-membered aromatic ring

C07C 233/53 . . . with the substituted hydrocarbon radical bound to the nitrogen atom of the carboxamide group by a carbon atom of a six-membered aromatic ring

C07C 233/54 . . . . having the carbon atom of the carboxamide group bound to a hydrogen atom or to a carbon atom of a saturated carbon skeleton

C07C 233/55 . . . . having the carbon atom of the carboxamide group bound to a carbon atom of an unsaturated carbon skeleton

C07C 233/56 . . having carbon atoms of carboxamide groups bound to carbon atoms of carboxyl groups, e.g. oxamides

C07C 233/57 . having carbon atoms of carboxamide groups bound to carbon atoms of rings other

than six-membered aromatic rings

C07C 233/58 .. having the nitrogen atoms of the carboxamide groups bound to hydrogen atoms or to carbon atoms of unsubstituted hydrocarbon radicals

C07C 233/59 .. having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a hydrocarbon radical substituted by halogen atoms or by nitro or nitroso groups

C07C 233/60 .. having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a hydrocarbon radical substituted by singly-bound oxygen atoms

C07C 233/61 .. having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a hydrocarbon radical substituted by doubly-bound oxygen atoms

C07C 233/62 .. having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a hydrocarbon radical substituted by amino groups

C07C 233/63 .. having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a hydrocarbon radical substituted by carboxyl groups

C07C 233/64 . having carbon atoms of carboxamide groups bound to carbon atoms of six-membered aromatic rings

C07C 233/65 .. having the nitrogen atoms of the carboxamide groups bound to hydrogen atoms or to carbon atoms of unsubstituted hydrocarbon radicals

C07C 233/66 .. having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a hydrocarbon radical substituted by halogen atoms or by nitro or nitroso groups

C07C 233/67 .. having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a hydrocarbon radical substituted by singly-bound oxygen atoms

C07C 233/68 ... with the substituted hydrocarbon radical bound to the nitrogen atom of the carboxamide group by an acyclic carbon atom

C07C 233/69 .... of an acyclic saturated carbon skeleton

C07C 233/70 .... of a saturated carbon skeleton containing rings

C07C 233/71 .... of an acyclic unsaturated carbon skeleton

C07C 233/72 .... of an unsaturated carbon skeleton containing rings other than six-membered aromatic rings

C07C 233/73 .... of a carbon skeleton containing six-membered aromatic rings

C07C 233/74 ... with the substituted hydrocarbon radical bound to the nitrogen atom of the carboxamide group by a carbon atom of a ring other than a six-membered aromatic ring

C07C 233/75 ... with the substituted hydrocarbon radical bound to the nitrogen atom of the carboxamide group by a carbon atom of a six-membered aromatic ring

C07C 233/76 .. having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a hydrocarbon radical substituted by doubly-bound oxygen atoms

C07C 233/77 .. having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a hydrocarbon radical substituted by amino groups

C07C 233/78 ... with the substituted hydrocarbon radical bound to the nitrogen atom of the carboxamide group by an acyclic carbon atom

C07C 233/79 ... with the substituted hydrocarbon radical bound to the nitrogen atom of the carboxamide group by a carbon atom of a ring other than a six-membered aromatic ring

C07C 233/80 ... with the substituted hydrocarbon radical bound to the nitrogen atom of the carboxamide group by a carbon atom of a six-membered aromatic ring

C07C 233/81 .. having the nitrogen atom of at least one of the carboxamide groups bound to a

carbon atom of a hydrocarbon radical substituted by carboxyl groups

C07C 233/82 . . . with the substituted hydrocarbon radical bound to the nitrogen atom of the carboxamide group by an acyclic carbon atom

C07C 233/83 . . . . of an acyclic saturated carbon skeleton

C07C 233/84 . . . . of a saturated carbon skeleton containing rings

C07C 233/85 . . . . of an acyclic unsaturated carbon skeleton

C07C 233/86 . . . . of an unsaturated carbon skeleton containing rings other than six-membered aromatic rings

C07C 233/87 . . . . of a carbon skeleton containing six-membered aromatic rings

C07C 233/88 . having nitrogen atoms of carboxamide groups bound to an acyclic carbon atom and to a carbon atom of a six-membered aromatic ring wherein at least one ortho-hydrogen atom has been replaced

C07C 233/89 . having nitrogen atoms of carboxamide groups quaternised

C07C 233/90 . having nitrogen atoms of carboxamide groups further acylated

C07C 233/91 . . with carbon atoms of the carboxamide groups bound to acyclic carbon atoms

C07C 233/92 . . with at least one carbon atom of the carboxamide groups bound to a carbon atom of a six-membered aromatic ring

C07C 235/00 Carboxylic acid amides, the carbon skeleton of the acid part being further substituted by oxygen atoms

C07C 235/02 . having carbon atoms of carboxamide groups bound to acyclic carbon atoms and singly-bound oxygen atoms bound to the same carbon skeleton

C07C 235/04 . . the carbon skeleton being acyclic and saturated

C07C 235/06 . . . having the nitrogen atoms of the carboxamide groups bound to hydrogen atoms or to acyclic carbon atoms

C07C 235/08 . . . having the nitrogen atom of at least one of the carboxamide groups bound to an acyclic carbon atom of a hydrocarbon radical substituted by singly-bound oxygen atoms

C07C 235/10 . . . having the nitrogen atom of at least one of the carboxamide groups bound to an acyclic carbon atom of a hydrocarbon radical substituted by nitrogen atoms not being part of nitro or nitroso groups

C07C 235/12 . . . having the nitrogen atom of at least one of the carboxamide groups bound to an acyclic carbon atom of a hydrocarbon radical substituted by carboxyl groups

C07C 235/14 . . . having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a ring other than a six-membered aromatic ring

C07C 235/16 . . . having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a six-membered aromatic ring

C07C 235/18 . . . having at least one of the singly-bound oxygen atoms further bound to a carbon atom of a six-membered aromatic ring, e.g. phenoxyacetamides

C07C 235/20 . . . . having the nitrogen atoms of the carboxamide groups bound to hydrogen atoms or to acyclic carbon atoms

C07C 235/22 . . . . having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a ring other than a six-membered aromatic ring

C07C 235/24 . . . . having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a six-membered aromatic ring

C07C 235/26 .. the carbon skeleton being saturated and containing rings

C07C 235/28 .. the carbon skeleton being acyclic and unsaturated

C07C 235/30 .. the carbon skeleton being unsaturated and containing rings other than six-membered aromatic rings

C07C 235/32 .. the carbon skeleton containing six-membered aromatic rings

C07C 235/34 ... having the nitrogen atoms of the carboxamide groups bound to hydrogen atoms or to acyclic carbon atoms

C07C 235/36 ... having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a ring other than a six-membered aromatic ring

C07C 235/38 ... having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a six-membered aromatic ring

C07C 235/40 . having carbon atoms of carboxamide groups bound to carbon atoms of rings other than six-membered aromatic rings and singly-bound oxygen atoms bound to the same carbon skeleton

C07C 235/42 . having carbon atoms of carboxamide groups bound to carbon atoms of six-membered aromatic rings and singly-bound oxygen atoms bound to the same carbon skeleton

C07C 235/44 .. with carbon atoms of carboxamide groups and singly-bound oxygen atoms bound to carbon atoms of the same non-condensed six-membered aromatic ring

C07C 235/46 ... having the nitrogen atoms of the carboxamide groups bound to hydrogen atoms or to acyclic carbon atoms

C07C 235/48 ... having the nitrogen atom of at least one of the carboxamide groups bound to an acyclic carbon atom of a hydrocarbon radical substituted by singly-bound oxygen atoms

C07C 235/50 ... having the nitrogen atom of at least one of the carboxamide groups bound to an acyclic carbon atom of a hydrocarbon radical substituted by nitrogen atoms not being part of nitro or nitroso groups

C07C 235/52 ... having the nitrogen atom of at least one of the carboxamide groups bound to an acyclic carbon atom of a hydrocarbon radical substituted by carboxyl groups

C07C 235/54 ... having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a ring other than a six-membered aromatic ring

C07C 235/56 ... having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a six-membered aromatic ring

C07C 235/58 ... with carbon atoms of carboxamide groups and singly-bound oxygen atoms, bound in ortho-position to carbon atoms of the same non-condensed six-membered aromatic ring

C07C 235/60 .... having the nitrogen atoms of the carboxamide groups bound to hydrogen atoms or to acyclic carbon atoms

C07C 235/62 .... having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a ring other than a six-membered aromatic ring

C07C 235/64 .... having the nitrogen atom of at least one of the carboxamide groups bound to a carbon atom of a six-membered aromatic ring

C07C 235/66 .. with carbon atoms of carboxamide groups bound to carbon atoms of six-membered aromatic rings being part of condensed ring systems and singly-bound oxygen atoms, bound to the same carbon skeleton

C07C 235/68 . having the nitrogen atom of at least one of the carboxamide groups bound to an acyclic carbon atom and to a carbon atom of a six-membered aromatic ring wherein at least one ortho-hydrogen atom has been replaced

C07C 235/70 . having carbon atoms of carboxamide groups and doubly-bound oxygen atoms bound to the same carbon skeleton

C07C 235/72 . . with the carbon atoms of the carboxamide groups bound to acyclic carbon atoms

C07C 235/74 . . . of a saturated carbon skeleton

C07C 235/76 . . . of an unsaturated carbon skeleton

C07C 235/78 . . . . the carbon skeleton containing rings

C07C 235/80 . . . having carbon atoms of carboxamide groups and keto groups bound to the same carbon atom, e.g. acetoacetamides

C07C 235/82 . . with the carbon atom of at least one of the carboxamide groups bound to a carbon atom of a ring other than a six-membered aromatic ring

C07C 235/84 . . with the carbon atom of at least one of the carboxamide groups bound to a carbon atom of a six-membered aromatic ring

C07C 235/86 . having the nitrogen atom of at least one of the carboxamide groups quaternised

C07C 235/88 . having the nitrogen atom of at least one of the carboxamide groups further acylated

C07C 237/00 Carboxylic acid amides, the carbon skeleton of the acid part being further substituted by amino groups

C07C 237/02 . having the carbon atoms of the carboxamide groups bound to acyclic carbon atoms of the carbon skeleton

C07C 237/04 . . the carbon skeleton being acyclic and saturated

C07C 237/06 . . . having the nitrogen atoms of the carboxamide groups bound to hydrogen atoms or to acyclic carbon atoms

C07C 237/08 . . . having the nitrogen atom of at least one of the carboxamide groups bound to an acyclic carbon atom of a hydrocarbon radical substituted by singly-bound oxygen atoms

C07C 237/10 . . . having the nitrogen atom of at least one of the carboxamide groups bound to an acyclic carbon atom of a hydrocarbon radical substituted by nitrogen atoms not being part of nitro or nitroso groups

C07C 237/12 . . . having the nitrogen atom of at least one of the carboxamide groups bound to an acyclic carbon atom of a hydrocarbon radical substituted by carboxyl groups (peptides C07K)

C07C 237/14 . . the carbon skeleton being saturated and containing rings

C07C 237/16 . . the carbon skeleton being acyclic and unsaturated

C07C 237/18 . . the carbon skeleton being unsaturated and containing rings other than six-membered aromatic rings

C07C 237/20 . . the carbon skeleton containing six-membered aromatic rings

C07C 237/22 . . having nitrogen atoms of amino groups bound to the carbon skeleton of the acid part, further acylated (peptides C07K)

C07C 237/24 . having the carbon atom of at least one of the carboxamide groups bound to a carbon atom of a ring other than a six-membered aromatic ring of the carbon skeleton

C07C 237/26 . . of a ring being part of a condensed ring system formed by at least four rings, e.g. tetracycline

C07C 237/28 . having the carbon atom of at least one of the carboxamide groups bound to a carbon

atom of a non-condensed six-membered aromatic ring of the carbon skeleton

C07C 237/30 . . having the nitrogen atom of the carboxamide group bound to hydrogen atoms or to acyclic carbon atoms

C07C 237/32 . . having the nitrogen atom of the carboxamide group bound to an acyclic carbon atom of a hydrocarbon radical substituted by oxygen atoms

C07C 237/34 . . having the nitrogen atom of the carboxamide group bound to an acyclic carbon atom of a hydrocarbon radical substituted by nitrogen atoms not being part of nitro or nitroso groups

C07C 237/36 . . having the nitrogen atom of the carboxamide group bound to an acyclic carbon atom of a hydrocarbon radical substituted by carboxyl groups

C07C 237/38 . . having the nitrogen atom of the carboxamide group bound to a carbon atom of a ring other than a six-membered aromatic ring

C07C 237/40 . . having the nitrogen atom of the carboxamide group bound to a carbon atom of a six-membered aromatic ring

C07C 237/42 . . having nitrogen atoms of amino groups bound to the carbon skeleton of the acid part, further acylated

C07C 237/44 . . having carbon atoms of carboxamide groups, amino groups and singly-bound oxygen atoms bound to carbon atoms of the same non-condensed six-membered aromatic ring

C07C 237/46 . . having carbon atoms of carboxamide groups, amino groups and at least three atoms of bromine or iodine, bound to carbon atoms of the same non-condensed six-membered aromatic ring

C07C 237/48 . having the carbon atom of at least one of the carboxamide groups bound to a carbon atom of a six-membered aromatic ring being part of a condensed ring system of the same carbon skeleton

C07C 237/50 . having the nitrogen atom of at least one of the carboxamide groups quaternised

C07C 237/52 . having the nitrogen atom of at least one of the carboxamide groups further acylated

C07C 239/00 **Compounds containing nitrogen-to-halogen bonds**
Hydroxylamino compounds or ethers or esters thereof (oximes C07C 251/00; hydroxamic acids or derivatives thereof C07C 259/00)

C07C 239/02 . Compounds containing nitrogen-to-halogen bonds

C07C 239/04 . . N-halogenated amines

C07C 239/06 . . N-halogenated carboxamides

C07C 239/08 . Hydroxylamino compounds or their ethers or esters

C07C 239/10 . . having nitrogen atoms of hydroxylamino groups further bound to carbon atoms of unsubstituted hydrocarbon radicals or of hydrocarbon radicals substituted by halogen atoms or by nitro or nitroso groups

C07C 239/12 . . having nitrogen atoms of hydroxylamino groups further bound to carbon atoms of hydrocarbon radicals substituted by singly-bound oxygen atoms

C07C 239/14 . . having nitrogen atoms of hydroxylamino groups further bound to carbon atoms of hydrocarbon radicals substituted by doubly-bound oxygen atoms

C07C 239/16 . . having nitrogen atoms of hydroxylamino groups further bound to carbon atoms of hydrocarbon radicals substituted by nitrogen atoms not being part of nitro or nitroso groups

C07C 239/18 . . having nitrogen atoms of hydroxylamino groups further bound to carbon atoms of hydrocarbon radicals substituted by carboxyl groups

C07C 239/20 . . having oxygen atoms of hydroxylamino groups etherified

C07C 239/22 . . having oxygen atoms of hydroxylamino groups esterified

C07C 241/00 Preparation of compounds containing chains of nitrogen atoms singly-bound to each other, e.g. hydrazines, triazanes

C07C 241/02 . Preparation of hydrazines

C07C 241/04 . Preparation of hydrazides

C07C 243/00 Compounds containing chains of nitrogen atoms singly-bound to each other, e.g. hydrazines, triazanes

C07C 243/02 . N-nitro compounds

C07C 243/04 . N-nitroso compounds

C07C 243/06 . . N-nitroso-amines

C07C 243/08 . . N-nitroso-carboxamides

C07C 243/10 . Hydrazines

C07C 243/12 . . having nitrogen atoms of hydrazine groups bound to acyclic carbon atoms

C07C 243/14 . . . of a saturated carbon skeleton

C07C 243/16 . . . of an unsaturated carbon skeleton

C07C 243/18 . . . . containing rings

C07C 243/20 . . having nitrogen atoms of hydrazine groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 243/22 . . having nitrogen atoms of hydrazine groups bound to carbon atoms of six-membered aromatic rings

C07C 243/24 . Hydrazines having nitrogen atoms of hydrazine groups acylated by carboxylic acids

C07C 243/26 . . with acylating carboxyl groups bound to hydrogen atoms or to acyclic carbon atoms

C07C 243/28 . . . to hydrogen atoms or to carbon atoms of a saturated carbon skeleton

C07C 243/30 . . . to carbon atoms of an unsaturated carbon skeleton

C07C 243/32 . . . . the carbon skeleton containing rings

C07C 243/34 . . . to carbon atoms of a carbon skeleton further substituted by nitrogen atoms

C07C 243/36 . . with acylating carboxyl groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 243/38 . . with acylating carboxyl groups bound to carbon atoms of six-membered aromatic rings

C07C 243/40 . Hydrazines having nitrogen atoms of hydrazine groups being quaternised

C07C 243/42 . Hydrazines having nitrogen atoms of hydrazine groups further singly-bound to hetero atoms

C07C 245/00 **Compounds containing chains of at least two nitrogen atoms with at least one nitrogen-to-nitrogen multiple bond** (azoxy compounds C07C 291/08)

C07C 245/02 . Azo compounds, i.e. compounds having the free valencies of -N=N- groups attached to different atoms, e.g. diazohydroxides

C07C 245/04 . . with nitrogen atoms of azo groups bound to acyclic carbon atoms or to carbon atoms of rings other than six-membered aromatic rings

C07C 245/06 . . with nitrogen atoms of azo groups bound to carbon atoms of six-membered aromatic rings

C07C 245/08 . . . with the two nitrogen atoms of azo groups bound to carbon atoms of six-membered aromatic rings, e.g. azobenzene

C07C 245/10 . . . with nitrogen atoms of azo groups bound to carbon atoms of six-membered aromatic rings being part of condensed ring systems

C07C 245/12 . Diazo compounds, i.e. compounds having the free valencies of =N2 groups attached to the same carbon atom

C07C 245/14 . . having diazo groups bound to acyclic carbon atoms of a carbon skeleton

C07C 245/16 . . . Diazomethane

C07C 245/18 . . . the carbon skeleton being further substituted by carboxyl groups

C07C 245/20 . Diazonium compounds

C07C 245/22 . containing chains of three or more nitrogen atoms with one or more nitrogen-to-nitrogen double bonds

C07C 245/24 . . Chains of only three nitrogen atoms, e.g. diazoamines

C07C 247/00 **Compounds containing azido groups**

C07C 247/02 . with azido groups bound to acyclic carbon atoms of a carbon skeleton

C07C 247/04 . . being saturated

C07C 247/06 . . . and containing rings

C07C 247/08 . . being unsaturated

C07C 247/10 . . . and containing rings

C07C 247/12 . . being further substituted by carboxyl groups

C07C 247/14 . with azido groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 247/16 . with azido groups bound to carbon atoms of six-membered aromatic rings of a carbon skeleton

C07C 247/18 . . being further substituted by carboxyl groups

C07C 247/20 . with azido groups acylated by carboxylic acids

C07C 247/22 . . with the acylating carboxyl groups bound to hydrogen atoms, to acyclic carbon atoms or to carbon atoms of rings other than six-membered aromatic rings

C07C 247/24 . . with at least one of the acylating carboxyl groups bound to a carbon atom of a six-membered aromatic ring

C07C 249/00 **Preparation of compounds containing nitrogen atoms doubly-bound to a carbon skeleton** (of diazo compounds C07C 245/12)

C07C 249/02 . of compounds containing imino groups

C07C 249/04 . of oximes
C07C 249/06 . . by nitrosation of hydrocarbons or substituted hydrocarbons
C07C 249/08 . . by reaction of hydroxylamines with carbonyl compounds
C07C 249/10 . . from nitro compounds or salts thereof
C07C 249/12 . . by reactions not involving the formation of oxyimino groups
C07C 249/14 . . Separation
Purification
Stabilisation
Use of additives

C07C 249/16 . of hydrazones

C07C 251/00 **Compounds containing nitrogen atoms doubly-bound to a carbon skeleton** (diazo compounds C07C 245/12)

C07C 251/02 . containing imino groups
C07C 251/04 . . having carbon atoms of imino groups bound to hydrogen atoms or to acyclic carbon atoms
C07C 251/06 . . . to carbon atoms of a saturated carbon skeleton
C07C 251/08 . . . . being acyclic
C07C 251/10 . . . to carbon atoms of an unsaturated carbon skeleton
C07C 251/12 . . . . being acyclic
C07C 251/14 . . . . containing rings other than six-membered aromatic rings
C07C 251/16 . . . . containing six-membered aromatic rings
C07C 251/18 . . having carbon atoms of imino groups bound to carbon atoms of rings other than six-membered aromatic rings
C07C 251/20 . . having carbon atoms of imino groups being part of rings other than six-membered aromatic rings
C07C 251/22 . . . Quinone imines
C07C 251/24 . . having carbon atoms of imino groups bound to carbon atoms of six-membered aromatic rings
C07C 251/26 . . having nitrogen atoms of imino groups further bound to halogen atoms
C07C 251/28 . . having nitrogen atoms of imino groups acylated
C07C 251/30 . . having nitrogen atoms of imino groups quaternised

C07C 251/32 . Oximes
C07C 251/34 . . with oxygen atoms of oxyimino groups bound to hydrogen atoms or to carbon atoms of unsubstituted hydrocarbon radicals
C07C 251/36 . . . with the carbon atoms of the oxyimino groups bound to hydrogen atoms or to acyclic carbon atoms
C07C 251/38 . . . . to carbon atoms of a saturated carbon skeleton

C07C 251/40 .... to carbon atoms of an unsaturated carbon skeleton

C07C 251/42 ... with the carbon atom of at least one of the oxyimino groups bound to a carbon atom of a ring other than a six-membered aromatic ring

C07C 251/44 ... with the carbon atom of at least one of the oxyimino groups being part of a ring other than a six-membered aromatic ring

C07C 251/46 .... Quinone oximes

C07C 251/48 ... with the carbon atom of at least one of the oxyimino groups bound to a carbon atom of a six-membered aromatic ring

C07C 251/50 .. having oxygen atoms of oxyimino groups bound to carbon atoms of substituted hydrocarbon radicals

C07C 251/52 ... of hydrocarbon radicals substituted by halogen atoms or by nitro or nitroso groups

C07C 251/54 ... of hydrocarbon radicals substituted by singly-bound oxygen atoms

C07C 251/56 ... of hydrocarbon radicals substituted by doubly-bound oxygen atoms

C07C 251/58 ... of hydrocarbon radicals substituted by nitrogen atoms not being part of nitro or nitroso groups

C07C 251/60 ... of hydrocarbon radicals substituted by carboxyl groups

C07C 251/62 .. having oxygen atoms of oxyimino groups esterified

C07C 251/64 ... by carboxylic acids

C07C 251/66 .... with the esterifying carboxyl groups bound to hydrogen atoms, to acyclic carbon atoms or to carbon atoms of rings other than six-membered aromatic rings

C07C 251/68 .... with at least one of the esterifying carboxyl groups bound to a carbon atom of a six-membered aromatic ring

C07C 251/70 .. Metal complexes of oximes

C07C 251/72 . Hydrazones

C07C 251/74 .. having doubly-bound carbon atoms of hydrazone groups bound to hydrogen atoms or to acyclic carbon atoms

C07C 251/76 ... to carbon atoms of a saturated carbon skeleton

C07C 251/78 ... to carbon atoms of an unsaturated carbon skeleton

C07C 251/80 .... the carbon skeleton containing rings

C07C 251/82 .. having doubly-bound carbon atoms of hydrazone groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 251/84 .. having doubly-bound carbon atoms of hydrazone groups being part of rings other than six-membered aromatic rings

C07C 251/86 .. having doubly-bound carbon atoms of hydrazone groups bound to carbon atoms of six-membered aromatic rings

C07C 251/88 .. having also the other nitrogen atom doubly-bound to a carbon atom, e.g. azines

C07C 253/00 **Preparation of carboxylic acid nitriles** (of cyanogen or compounds thereof C01C 3/00)

C07C 253/02 . by reaction of nitrogen oxide with organic compounds

C07C 253/04 . by reaction of cyanogen halides, e.g. C1CN, with organic compounds

C07C 253/06 . from N-formylated amino compounds

C07C 253/08 . by addition of hydrogen cyanide or salts thereof to unsaturated compounds
C07C 253/10 . . to compounds containing carbon-to-carbon double bonds
C07C 253/12 . . to compounds containing carbon-to-carbon triple bonds

C07C 253/14 . by reaction of cyanides with halogen-containing compounds with replacement of halogen atoms by cyano groups

C07C 253/16 . by reaction of cyanides with lactones or compounds containing hydroxy groups or etherified or esterified hydroxy groups

C07C 253/18 . by reaction of ammonia or amines with compounds containing carbon-to-carbon multiple bonds other than in six-membered aromatic rings

C07C 253/20 . by dehydration of carboxylic acid amides

C07C 253/22 . by reaction of ammonia with carboxylic acids with replacement of carboxyl groups by cyano groups

C07C 253/24 . by ammoxidation of hydrocarbons or substituted hydrocarbons
C07C 253/26 . . containing carbon-to-carbon multiple bonds, e.g. unsaturated aldehydes
C07C 253/28 . . containing six-membered aromatic rings, e.g. styrene

C07C 253/30 . by reactions not involving the formation of cyano groups

C07C 253/32 . Separation
Purification
Stabilisation
Use of additives
C07C 253/34 . . Separation
Purification

C07C 255/00 **Carboxylic acid nitriles** (cyanogen or compounds thereof C01C 3/00)

C07C 255/01 . having cyano groups bound to acyclic carbon atoms
C07C 255/02 . . of an acyclic and saturated carbon skeleton
C07C 255/03 . . . Mononitriles
C07C 255/04 . . . containing two cyano groups bound to the carbon skeleton
C07C 255/05 . . . containing at least three cyano groups bound to the carbon skeleton
C07C 255/06 . . of an acyclic and unsaturated carbon skeleton
C07C 255/07 . . . Mononitriles
C07C 255/08 . . . . Acrylonitrile
Methacrylonitrile
C07C 255/09 . . . containing at least two cyano groups bound to the carbon skeleton
C07C 255/10 . . containing cyano groups and halogen atoms, or nitro or nitroso groups, bound to the same acyclic carbon skeleton
C07C 255/11 . . containing cyano groups and singly-bound oxygen atoms bound to the same saturated acyclic carbon skeleton
C07C 255/12 . . . containing cyano groups and hydroxy groups bound to the carbon skeleton

C07C 255/13 . . . containing cyano groups and etherified hydroxy groups bound to the carbon skeleton

C07C 255/14 . . . containing cyano groups and esterified hydroxy groups bound to the carbon skeleton

C07C 255/15 . . containing cyano groups and singly-bound oxygen atoms bound to the same unsaturated acyclic carbon skeleton

C07C 255/16 . . containing cyano groups and singly-bound oxygen atoms bound to the same carbon atom of an acyclic carbon skeleton

C07C 255/17 . . containing cyano groups and doubly-bound oxygen atoms bound to the same acyclic carbon skeleton

C07C 255/18 . . containing cyano groups bound to carbon atoms of carboxyl groups

C07C 255/19 . . containing cyano groups and carboxyl groups, other than cyano groups, bound to the same saturated acyclic carbon skeleton

C07C 255/20 . . . the carbon skeleton being further substituted by singly-bound oxygen atoms

C07C 255/21 . . . the carbon skeleton being further substituted by doubly-bound oxygen atoms

C07C 255/22 . . . containing cyano groups and at least two carboxyl groups bound to the carbon skeleton

C07C 255/23 . . containing cyano groups and carboxyl groups, other than cyano groups, bound to the same unsaturated acyclic carbon skeleton

C07C 255/24 . . containing cyano groups and singly-bound nitrogen atoms, not being further bound to other hetero atoms, bound to the same saturated acyclic carbon skeleton

C07C 255/25 . . . Aminoacetonitriles

C07C 255/26 . . . containing cyano groups, amino groups and singly-bound oxygen atoms bound to the carbon skeleton

C07C 255/27 . . . containing cyano groups, amino groups and doubly-bound oxygen atoms bound to the carbon skeleton

C07C 255/28 . . . containing cyano groups, amino groups and carboxyl groups, other than cyano groups, bound to the carbon skeleton

C07C 255/29 . . . containing cyano groups and acylated amino groups bound to the carbon skeleton

C07C 255/30 . . containing cyano groups and singly-bound nitrogen atoms, not being further bound to other hetero atoms, bound to the same unsaturated acyclic carbon skeleton

C07C 255/31 . . having cyano groups bound to acyclic carbon atoms of a carbon skeleton containing rings other than six-membered aromatic rings

C07C 255/32 . . having cyano groups bound to acyclic carbon atoms of a carbon skeleton containing at least one six-membered aromatic ring

C07C 255/33 . . . with cyano groups linked to the six-membered aromatic ring, or to the condensed ring system containing that ring, by saturated carbon chains

C07C 255/34 . . . with cyano groups linked to the six-membered aromatic ring, or to the condensed ring system containing that ring, by unsaturated carbon chains

C07C 255/35 . . . the carbon skeleton being further substituted by halogen atoms, or by nitro or nitroso groups

C07C 255/36 . . . the carbon skeleton being further substituted by hydroxy groups

C07C 255/37 . . . the carbon skeleton being further substituted by etherified hydroxy groups

C07C 255/38 . . . the carbon skeleton being further substituted by esterified hydroxy groups

C07C 255/39 . . . . with hydroxy groups esterified by derivatives of 2,2-dimethylcyclopropane carboxylic acids, e.g. of chrysanthemumic acids

C07C 255/40 . . . the carbon skeleton being further substituted by doubly-bound oxygen atoms

C07C 255/41 . . . the carbon skeleton being further substituted by carboxyl groups, other than cyano groups

C07C 255/42 . . . the carbon skeleton being further substituted by singly-bound nitrogen atoms, not being further bound to other hetero atoms

C07C 255/43 . . . . the carbon skeleton being further substituted by singly-bound oxygen atoms

C07C 255/44 . . . . at least one of the singly-bound nitrogen atoms being acylated

C07C 255/45 . having cyano groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 255/46 . . to carbon atoms of non-condensed rings

C07C 255/47 . . to carbon atoms of rings being part of condensed ring systems

C07C 255/48 . . to carbon atoms of 2,2-dimethylcyclopropane rings, e.g. nitrile of chrysanthemumic acids

C07C 255/49 . having cyano groups bound to carbon atoms of six-membered aromatic rings of a carbon skeleton

C07C 255/50 . . to carbon atoms of non-condensed six-membered aromatic rings

C07C 255/51 . . . containing at least two cyano groups bound to the carbon skeleton

C07C 255/52 . . to carbon atoms of six-membered aromatic rings being part of condensed ring systems

C07C 255/53 . . containing cyano groups and hydroxy groups bound to the carbon skeleton

C07C 255/54 . . containing cyano groups and etherified hydroxy groups bound to the carbon skeleton

C07C 255/55 . . containing cyano groups and esterified hydroxy groups bound to the carbon skeleton

C07C 255/56 . . containing cyano groups and doubly-bound oxygen atoms bound to the carbon skeleton

C07C 255/57 . . containing cyano groups and carboxyl groups, other than cyano groups, bound to the carbon skeleton

C07C 255/58 . . containing cyano groups and singly-bound nitrogen atoms, not being further bound to other hetero atoms, bound to the carbon skeleton

C07C 255/59 . . . the carbon skeleton being further substituted by singly-bound oxygen atoms

C07C 255/60 . . . at least one of the singly-bound nitrogen atoms being acylated

C07C 255/61 . containing cyano groups and nitrogen atoms being part of imino group bound to the same carbon skeleton

C07C 255/62 . containing cyano groups and oxygen atoms being part of oxyimino groups bound to the same carbon skeleton

C07C 255/63 . containing cyano groups and nitrogen atoms further bound to other hetero atoms, other than oxygen atoms of nitro or nitroso groups, bound to the same carbon skeleton

C07C 255/64 . . with the nitrogen atoms further bound to oxygen atoms

C07C 255/65 . . with the nitrogen atoms further bound to nitrogen atoms

C07C 255/66 . . . having cyano groups and nitrogen atoms being part of hydrazine or hydrazone groups bound to the same carbon skeleton

C07C 255/67 . . . having cyano groups and azido groups bound to the same carbon skeleton

C07C 257/00 **Compounds containing carboxyl groups, the doubly-bound oxygen atom of a carboxyl group being replaced by a doubly-bound nitrogen atom, this nitrogen atom not being further bound to an oxygen atom, e.g. imino-ethers, amidines**

C07C 257/02 . with replacement of the other oxygen atom of the carboxyl group by halogen atoms, e.g. imino-halides

C07C 257/04 . without replacement of the other oxygen atom of the carboxyl group, e.g. imino-ethers

C07C 257/06 . . having carbon atoms of imino-carboxyl groups bound to hydrogen atoms, to acyclic carbon atoms, or to carbon atoms of rings other than six-membered aromatic rings

C07C 257/08 . . having carbon atoms of imino-carboxyl groups bound to carbon atoms of six-membered aromatic rings

C07C 257/10 . with replacement of the other oxygen atom of the carboxyl group by nitrogen atoms, e.g. amidines

C07C 257/12 . . having carbon atoms of amidino groups bound to hydrogen atoms

C07C 257/14 . . having carbon atoms of amidino groups bound to acyclic carbon atoms

C07C 257/16 . . having carbon atoms of amidino groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 257/18 . . having carbon atoms of amidino groups bound to carbon atoms of six-membered aromatic rings

C07C 257/20 . . having nitrogen atoms of amidino groups acylated

C07C 257/22 . . having nitrogen atoms of amidino groups further bound to nitrogen atoms, e.g. hydrazidines

C07C 259/00 **Compounds containing carboxyl groups, an oxygen atom of a carboxyl group being replaced by a nitrogen atom, this nitrogen atom being further bound to an oxygen atom and not being part of nitro or nitroso groups**

C07C 259/02 . with replacement of the other oxygen atom of the carboxyl group by halogen atoms

C07C 259/04 . without replacement of the other oxygen atom of the carboxyl group, e.g. hydroxamic acids

C07C 259/06 . . having carbon atoms of hydroxamic groups bound to hydrogen atoms or to acyclic carbon atoms

C07C 259/08 . . having carbon atoms of hydroxamic groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 259/10 . . having carbon atoms of hydroxamic groups bound to carbon atoms of six-membered aromatic rings

C07C 259/12 . with replacement of the other oxygen atom of the carboxyl group by nitrogen atoms, e.g. N-hydroxyamidines

C07C 259/14 . . having carbon atoms of hydroxamidine groups bound to hydrogen atoms or to acyclic carbon atoms

C07C 259/16 . . having carbon atoms of hydroxamidine groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 259/18 . . having carbon atoms of hydroxamidine groups bound to carbon atoms of six-membered aromatic rings

C07C 259/20 . . with at least one nitrogen atom of hydroxamidine groups bound to another nitrogen atom

C07C 261/00 Derivatives of cyanic acid

C07C 261/02 . Cyanates

C07C 261/04 . Cyanamides (unsubstituted cyanamide C01C 3/16)

C07C 263/00 Preparation of derivatives of isocyanic acid

C07C 263/02 . by reaction of halides with isocyanic acid or its derivatives

C07C 263/04 . from or via carbamates or carbamoyl halides

C07C 263/06 . from or via ureas

C07C 263/08 . from or via heterocyclic compounds, e.g. pyrolysis of furoxans

C07C 263/10 . by reaction of amines with carbonyl halides, e.g. with phosgene

C07C 263/12 . from or via nitrogen analogues of carboxylic acids, e.g. from hydroxamic acids, involving a Hofmann, Curtius or Lossen-type rearrangement (C07C 209/56 takes precedence)

C07C 263/14 . by catalytic reaction of nitro compounds with carbon monoxide

C07C 263/16 . by reactions not involving the formation of isocyanate groups

C07C 263/18 . Separation
Purification
Stabilisation
Use of additives

C07C 263/20 . . Separation
Purification

C07C 265/00 Derivatives of isocyanic acid

C07C 265/02 . having isocyanate groups bound to acyclic carbon atoms

C07C 265/04 . . of a saturated carbon skeleton

C07C 265/06 . . of an unsaturated carbon skeleton

C07C 265/08 . . . the carbon skeleton containing rings

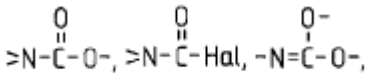
C07C 265/10 . having isocyanate groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 265/12 . having isocyanate groups bound to carbon atoms of six-membered aromatic rings

C07C 265/14 . containing at least two isocyanate groups bound to the same carbon skeleton

C07C 265/16 . having isocyanate groups acylated

C07C 267/00 Carbodiimides

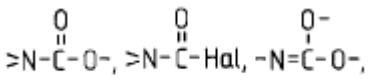
C07C 269/00 Preparation of derivatives of carbamic acid, i.e. compounds containing any of the groups  **, the nitrogen atom not being part of nitro or nitroso groups**

C07C 269/02 . from isocyanates with formation of carbamate groups

C07C 269/04 . from amines with formation of carbamate groups

C07C 269/06 . by reactions not involving the formation of carbamate groups

C07C 269/08 . Separation
Purification
Stabilisation
Use of additives

C07C 271/00 Derivatives of carbamic acids, i.e. compounds containing any of the groups  **, the nitrogen atom not being part of nitro or nitroso groups**

C07C 271/02 . Carbamic acids
Salts of carbamic acids (unsubstituted carbamic acid or salts thereof C01B 21/12)

C07C 271/04 . Carbamic acid halides

C07C 271/06 . Esters of carbamic acids

C07C 271/08 . . having oxygen atoms of carbamate groups bound to acyclic carbon atoms

C07C 271/10 . . . with the nitrogen atoms of the carbamate groups bound to hydrogen atoms or to acyclic carbon atoms

C07C 271/12 . . . . to hydrogen atoms or to carbon atoms of unsubstituted hydrocarbon radicals

C07C 271/14 . . . . to carbon atoms of hydrocarbon radicals substituted by halogen atoms or by nitro or nitroso groups

C07C 271/16 . . . . to carbon atoms of hydrocarbon radicals substituted by singly-bound oxygen atoms

C07C 271/18 . . . . to carbon atoms of hydrocarbon radicals substituted by doubly-bound oxygen atoms

C07C 271/20 . . . . to carbon atoms of hydrocarbon radicals substituted by nitrogen atoms not being part of nitro or nitroso groups

C07C 271/22 . . . . to carbon atoms of hydrocarbon radicals substituted by carboxyl groups

C07C 271/24 . . . with the nitrogen atom of at least one of the carbamate groups bound to a carbon atom of a ring other than a six-membered aromatic ring

C07C 271/26 . . . with the nitrogen atom of at least one of the carbamate groups bound to a carbon atom of a six-membered aromatic ring

C07C 271/28 . . . . to a carbon atom of a non-condensed six-membered aromatic ring

C07C 271/30 . . . . to a carbon atom of a six-membered aromatic ring being part of a condensed ring system

C07C 271/32 . . having oxygen atoms of carbamate groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 271/34 . . . with the nitrogen atoms of the carbamate groups bound to hydrogen atoms or to acyclic carbon atoms

C07C 271/36 . . . with the nitrogen atom of at least one of the carbamate groups bound to a carbon atom of a ring other than a six-membered aromatic ring

C07C 271/38 . . . with the nitrogen atom of at least one of the carbamate groups bound to a carbon atom of a six-membered aromatic ring

C07C 271/40 . . having oxygen atoms of carbamate groups bound to carbon atoms of six-membered aromatic rings

C07C 271/42 . . . with the nitrogen atoms of the carbamate groups bound to hydrogen atoms or to acyclic carbon atoms

C07C 271/44 . . . . to hydrogen atoms or to carbon atoms of unsubstituted hydrocarbon radicals

C07C 271/46 . . . . to carbon atoms of hydrocarbon radicals substituted by halogen atoms or by nitro or nitroso groups

C07C 271/48 . . . . to carbon atoms of hydrocarbon radicals substituted by singly-bound oxygen atoms

C07C 271/50 . . . . to carbon atoms of hydrocarbon radicals substituted by doubly-bound oxygen atoms

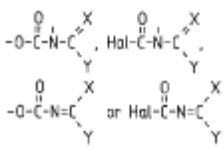
C07C 271/52 . . . . to carbon atoms of hydrocarbon radicals substituted by nitrogen atoms not being part of nitro or nitroso groups

C07C 271/54 . . . . to carbon atoms of hydrocarbon radicals substituted by carboxyl groups

C07C 271/56 . . . with the nitrogen atom of at least one of the carbamate groups bound to a carbon atom of a ring other than a six-membered aromatic ring

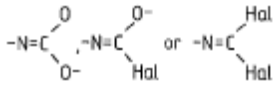
C07C 271/58 . . . with the nitrogen atom of at least one of the carbamate groups bound to a carbon atom of a six-membered aromatic ring

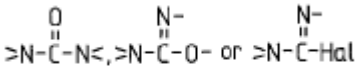
C07C 271/60 . having oxygen atoms of carbamate groups bound to nitrogen atoms

C07C 271/62 . Compounds containing any of the groups  , X being a hetero atom, Y being any atom, e.g. N-acylcarbamates

C07C 271/64 . . Y being a hydrogen or a carbon atom, e.g. benzoylcarbamates

C07C 271/66 . . Y being a hetero atom

C07C 271/68 . Compounds containing any of the groups 

C07C 273/00 **Preparation of urea or its derivatives, i.e. compounds containing any of the groups**  **, the nitrogen atoms not being part of nitro or nitroso groups**

C07C 273/02 . of urea, its salts, complexes or addition compounds

C07C 273/025 . . {of solutions of urea and formaldehyde }

C07C 273/04 . . from carbon dioxide and ammonia

C07C 273/06 . . from cyanamide or calcium cyanamide

C07C 273/08 . . from ammoniacal liquor

C07C 273/10 . . combined with the synthesis of ammonia

C07C 273/12 . . combined with the synthesis of melamine

C07C 273/14 . . Separation
Purification
Stabilisation
Use of additives

C07C 273/16 . . . Separation
Purification

C07C 273/18 . of substituted ureas

C07C 273/1809 . . {with formation of the N-C(O)-N moiety }

C07C 273/1818 . . . {from -N=C=O and XNR`R" }

C07C 273/1827 . . . . {X being H }

C07C 273/1836 . . . {from derivatives of carbamic acid }

C07C 273/1845 . . . . {comprising the -N-C(O)-Hal moiety }

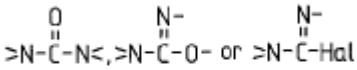
C07C 273/1854 . . {by reactions not involving the formation of the N-C(O)-N- moiety }

C07C 273/1863 . . . {from urea }

C07C 273/1872 . . {Preparation of compounds comprising a -N-C(O)-N-C(O)-N- moiety }

C07C 273/1881 . . . {from urea }

C07C 273/189 . . {Purification, separation, stabilisation, use of additives }

C07C 275/00 **Derivatives of urea, i.e. compounds containing any of the groups**  **, the nitrogen atoms not being part of nitro or nitroso groups**

C07C 275/02 . Salts
Complexes
Addition compounds

C07C 275/04 . having nitrogen atoms of urea groups bound to acyclic carbon atoms

C07C 275/06 . . of an acyclic and saturated carbon skeleton

C07C 275/08 . . . being further substituted by halogen atoms, or by nitro or nitroso groups

C07C 275/10 . . . being further substituted by singly-bound oxygen atoms

C07C 275/12 . . . being further substituted by doubly-bound oxygen atoms

C07C 275/14 . . . being further substituted by nitrogen atoms not being part of nitro or nitroso groups

C07C 275/16 . . . being further substituted by carboxyl groups

C07C 275/18 . . of a saturated carbon skeleton containing rings

C07C 275/20 . . of an unsaturated carbon skeleton

C07C 275/22 . . . containing rings other than six-membered aromatic rings

C07C 275/24 . . . containing six-membered aromatic rings

C07C 275/26 . having nitrogen atoms of urea groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 275/28 . having nitrogen atoms of urea groups bound to carbon atoms of six-membered aromatic rings of a carbon skeleton

C07C 275/30 . . being further substituted by halogen atoms, or by nitro or nitroso groups

C07C 275/32 . . being further substituted by singly-bound oxygen atoms

C07C 275/34 . . . having nitrogen atoms of urea groups and singly-bound oxygen atoms bound to carbon atoms of the same non-condensed six-membered aromatic ring

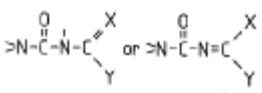
C07C 275/36 . . . . with at least one of the oxygen atoms further bound to a carbon atom of a six-membered aromatic ring, e.g. N-aryloxyphenylureas

C07C 275/38 . . being further substituted by doubly-bound oxygen atoms

C07C 275/40 . . being further substituted by nitrogen atoms not being part of nitro or nitroso groups

C07C 275/42 . . being further substituted by carboxyl groups

C07C 275/44 . having nitrogen atoms of urea groups doubly-bound to carbon atoms

C07C 275/46 . containing any of the groups  , X being a hetero atom, Y being any atom, e.g. acylureas

C07C 275/48 . . Y being a hydrogen or a carbon atom

C07C 275/50 . . . Y being a hydrogen or an acyclic carbon atom

C07C 275/52 . . . Y being a carbon atom of a ring other than a six-membered aromatic ring

C07C 275/54 . . . Y being a carbon atom of a six-membered aromatic ring, e.g. benzoylureas

C07C 275/56 . . . X being a nitrogen atom

C07C 275/58 . . Y being a hetero atom

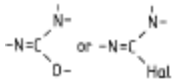
C07C 275/60 . . . Y being an oxygen atom, e.g. allophanic acids

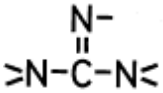
C07C 275/62 . . . Y being a nitrogen atom, e.g. biuret

C07C 275/64 . having nitrogen atoms of urea groups singly-bound to oxygen atoms

C07C 275/66 . having nitrogen atoms of urea groups bound to halogen atoms or to nitro or nitroso groups

C07C 275/68 . . N-nitroso ureas

C07C 275/70 . Compounds containing any of the groups  , e.g. isoureas

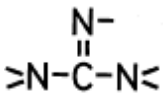
C07C 277/00 Preparation of guanidine or its derivatives, i.e. compounds containing the group  , the singly-bound nitrogen atoms not being part of nitro or nitroso groups

C07C 277/02 . of guanidine from cyanamide, calcium cyanamide or dicyandiamides

C07C 277/04 . of guanidine from ammonium thiocyanate

C07C 277/06 . Purification or separation of guanidine

C07C 277/08 . of substituted guanidines

C07C 279/00 Derivatives of guanidine, i.e. compounds containing the group  , the singly-bound nitrogen atoms not being part of nitro or nitroso groups

C07C 279/02 . Guanidine
Salts, complexes or addition compounds thereof

C07C 279/04 . having nitrogen atoms of guanidine groups bound to acyclic carbon atoms of a carbon skeleton

C07C 279/06 . . being further substituted by halogen atoms, or by nitro or nitroso groups

C07C 279/08 . . being further substituted by singly-bound oxygen atoms

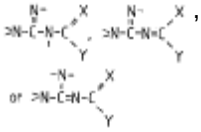
C07C 279/10 . . being further substituted by doubly-bound oxygen atoms

C07C 279/12 . . being further substituted by nitrogen atoms not being part of nitro or nitroso groups

C07C 279/14 . . being further substituted by carboxyl groups

C07C 279/16 . having nitrogen atoms of guanidine groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 279/18 . having nitrogen atoms of guanidine groups bound to carbon atoms of six-membered aromatic rings

C07C 279/20 . containing any of the groups  , X being a hetero atom, Y being any atom, e.g. acylguanidines

C07C 279/22 . . Y being a hydrogen or a carbon atom, e.g. benzoylguanidines

C07C 279/24 . . Y being a hetero atom

C07C 279/26 . . . X and Y being nitrogen atoms, i.e. biguanides

C07C 279/265 . . . . {containing two or more biguanide groups }

C07C 279/28 . having nitrogen atoms of guanidine groups bound to cyano groups, e.g. cyanoguanidines, dicyandiamides

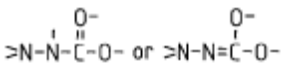
C07C 279/30 . having nitrogen atoms of guanidine groups bound to nitro or nitroso groups

C07C 279/32 . . N-nitroguanidines

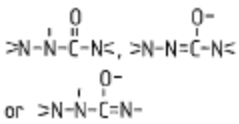
C07C 279/34 . . . N-nitroguanidine

C07C 279/36 . . . Substituted N-nitroguanidines

C07C 281/00 **Derivatives of carbonic acid containing functional groups covered by groups C07C 269/00 to C07C 279/00 in which at least one nitrogen atom of these functional groups is further bound to another nitrogen atom not being part of a nitro or nitroso group**

C07C 281/02 . Compounds containing any of the groups  , e.g. carbazates

C07C 281/04 . . the other nitrogen atom being further doubly-bound to a carbon atom

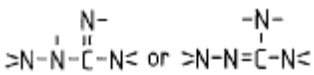
C07C 281/06 . Compounds containing any of the groups  , e.g. semicarbazides

C07C 281/08 . . the other nitrogen atom being further doubly-bound to a carbon atom, e.g. semicarbazones

C07C 281/10 . . . the carbon atom being further bound to an acyclic carbon atom or to a carbon atom of a ring other than a six-membered aromatic ring

C07C 281/12 . . . the carbon atom being part of a ring other than a six-membered aromatic ring

C07C 281/14 . . . the carbon atom being further bound to a carbon atom of a six-membered aromatic ring

C07C 281/16 . Compounds containing any of the groups  , e.g. aminoguanidine

C07C 281/18 . . the other nitrogen atom being further doubly-bound to a carbon atom, e.g. guanylhydrazones

C07C 281/20 . the two nitrogen atoms of the functional groups being doubly-bound to each other, e.g. azoformamide

C07C 291/00 **Compounds containing carbon and nitrogen and having functional groups not covered by groups C07C 201/00 to C07C 281/00**

C07C 291/02 . containing nitrogen-oxide bonds

C07C 291/04 . . containing amino-oxide bonds

C07C 291/06 . . Nitrile oxides

C07C 291/08 . . Azoxy compounds

C07C 291/10 . Isocyanides

C07C 291/12 . Fulminates

C07C 291/14 . containing at least one carbon atom bound to a nitro or nitroso group and doubly-bound to a hetero atom

Guide heading: **Compounds containing carbon together with sulfur, selenium, or tellurium, with or without hydrogen, halogens, oxygen, or nitrogen** (irradiation products of cholesterol or its derivatives C07C 401/00; vitamin D derivatives, 9-10-seco cyclopenta[a]phenanthrene or analogues obtained by chemical preparation without irradiation C07C 401/00; derivatives of cyclohexane or of a cyclohexene { or of cyclohexadiene }, having a side-chain containing an acyclic unsaturated part of at least four carbon atoms, this part being directly attached to the cyclohexane or cyclohexene { or cyclohexadiene } rings C07C 403/00; protaglandins or derivatives thereof C07C 405/00; peroxy compounds C07C 407/00, C07C 409/00)

C07C 301/00 **Esters of sulfurous acid** (cyclic esters C07D)

C07C 301/02 . having sulfite groups bound to carbon atoms of six-membered aromatic rings

C07C 303/00 **Preparation of esters or amides of sulfuric acids**
Preparation of sulfonic acids or of their esters, halides, anhydrides or amides

C07C 303/02 . of sulfonic acids or halides thereof

C07C 303/04 . . by substitution of hydrogen atoms by sulfo or halosulfonyl groups

C07C 303/06 . . . by reaction with sulfuric acid or sulfur trioxide

C07C 303/08 . . . by reaction with halogenosulfonic acids

C07C 303/10 . . . by reaction with sulfur dioxide and halogen or by reaction with sulfuryl halides

C07C 303/12 . . . by reaction with thionylhalides

C07C 303/14 . . by sulfoxidation, i.e. by reaction with sulfur dioxide and oxygen with formation of sulfo or halosulfonyl groups

C07C 303/16 . . by oxidation of thiols, sulfides, hydropolysulfides, or polysulfides with formation of sulfo or halosulfonyl groups

C07C 303/18 . . by reaction of sulfides with compounds having functional groups with formation of sulfo or halosulfonyl groups

C07C 303/20 . . by addition of sulfurous acid or salts thereof to compounds having carbon-to-carbon multiple bonds

C07C 303/22 . . from sulfonic acids, by reactions not involving the formation of sulfo or halosulfonyl groups; {from sulfonic halides by reactions not involving the formation of halosulfonyl groups }

C07C 303/24 . of esters of sulfuric acids

C07C 303/26 . of esters of sulfonic acids

C07C 303/28 . . by reaction of hydroxy compounds with sulfonic acids or derivatives thereof

C07C 303/30 . . by reactions not involving the formation of esterified sulfo groups

C07C 303/32 . of salts of sulfonic acids

C07C 303/34 . of amides of sulfuric acids

C07C 303/36 . of amides of sulfonic acids

C07C 303/38 . . by reaction of ammonia or amines with sulfonic acids, or with esters, anhydrides, or halides thereof

C07C 303/40 . . by reactions not involving the formation of sulfonamide groups

C07C 303/42 . Separation
Purification
Stabilisation
Use of additives

C07C 303/44 . . Separation
Purification

C07C 303/46 . . . from by-products of refining mineral oils with sulfuric acid

C07C 305/00 **Esters of sulfuric acids** (cyclic esters C07D)

C07C 305/02 . having oxygen atoms of sulfate groups bound to acyclic carbon atoms of a carbon skeleton

C07C 305/04 . . being acyclic and saturated

C07C 305/06 . . . Hydrogenosulfates

C07C 305/08 . . . Dialkylsulfates
Substituted dialkylsulfates

C07C 305/10 . . . being further substituted by singly-bound oxygen atoms

C07C 305/12 . . being saturated and containing rings

C07C 305/14 . . being acyclic and unsaturated

C07C 305/16 . . being unsaturated and containing rings

C07C 305/18 . . . containing six-membered aromatic rings

C07C 305/20 . having oxygen atoms of sulfate groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 305/22 . having oxygen atoms of sulfate groups bound to carbon atoms of six-membered aromatic rings

C07C 305/24 . . of non-condensed six-membered aromatic rings

C07C 305/26 . Halogenosulfates, i.e. monoesters of halogenosulfuric acids

C07C 307/00 **Amides of sulfuric acids, i.e. compounds having singly-bound oxygen atoms of sulfate groups replaced by nitrogen atoms, not being part of nitro or nitroso groups**

C07C 307/02 . Monoamides of sulfuric acids or esters thereof, e.g. sulfamic acids

C07C 307/04 . Diamides of sulfuric acids

C07C 307/06 . . having nitrogen atoms of the sulfamide groups bound to acyclic carbon atoms

C07C 307/08 . . having nitrogen atoms of the sulfamide groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 307/10 . . having nitrogen atoms of the sulfamide groups bound to carbon atoms of six-membered aromatic rings

C07C 309/00 Sulfonic acids
Halides, esters, or anhydrides thereof

C07C 309/01 . Sulfonic acids

C07C 309/02 . . having sulfo groups bound to acyclic carbon atoms

C07C 309/03 . . . of an acyclic saturated carbon skeleton

C07C 309/04 . . . . containing only one sulfo group

C07C 309/05 . . . . containing at least two sulfo groups bound to the carbon skeleton

C07C 309/06 . . . . containing halogen atoms, or nitro or nitroso groups bound to the carbon skeleton

C07C 309/07 . . . . containing oxygen atoms bound to the carbon skeleton

C07C 309/08 . . . . . containing hydroxy groups bound to the carbon skeleton

C07C 309/09 . . . . . containing etherified hydroxy groups bound to the carbon skeleton

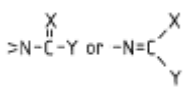
C07C 309/10 . . . . . with the oxygen atom of at least one of the etherified hydroxy groups further bound to an acyclic carbon atom

C07C 309/11 . . . . . with the oxygen atom of at least one of the etherified hydroxy groups further bound to a carbon atom of a six-membered aromatic ring

C07C 309/12 . . . . . containing esterified hydroxy groups bound to the carbon skeleton

C07C 309/13 . . . . containing nitrogen atoms, not being part of nitro or nitroso groups, bound to the carbon skeleton

C07C 309/14 . . . . . containing amino groups bound to the carbon skeleton

C07C 309/15 . . . . . the nitrogen atom of at least one of the amino groups being part of any of the groups  , X being a hetero atom, Y being any atom

C07C 309/16 . . . . . containing doubly-bound nitrogen atoms bound to the carbon skeleton

C07C 309/17 . . . . containing carboxyl groups bound to the carbon skeleton

C07C 309/18 . . . . . containing amino groups bound to the same carbon skeleton

C07C 309/19 . . . of a saturated carbon skeleton containing rings

C07C 309/20 . . . of an acyclic unsaturated carbon skeleton

C07C 309/21 . . . . containing nitrogen atoms, not being part of nitro or nitroso groups, bound to the carbon skeleton

C07C 309/22 . . . . containing carboxyl groups bound to the carbon skeleton

C07C 309/23 . . . of an unsaturated carbon skeleton containing rings other than six-membered aromatic rings

C07C 309/24 . . . of a carbon skeleton containing six-membered aromatic rings

C07C 309/25 . . having sulfo groups bound to carbon atoms of rings other than six-membered

aromatic rings of a carbon skeleton

C07C 309/26 . . . containing nitrogen atoms, not being part of nitro or nitroso groups, bound to the carbon skeleton

C07C 309/27 . . . containing carboxyl groups bound to the carbon skeleton

C07C 309/28 . . having sulfo groups bound to carbon atoms of six-membered aromatic rings of a carbon skeleton

C07C 309/29 . . . of non-condensed six-membered aromatic rings

C07C 309/30 . . . . of six-membered aromatic rings substituted by alkyl groups

C07C 309/31 . . . . . by alkyl groups containing at least three carbon atoms

C07C 309/32 . . . . containing at least two non-condensed six-membered aromatic rings in the carbon skeleton

C07C 309/33 . . . of six-membered aromatic rings being part of condensed ring systems

C07C 309/34 . . . . formed by two rings

C07C 309/35 . . . . . Naphthalene sulfonic acids

C07C 309/36 . . . . . substituted by alkyl groups

C07C 309/37 . . . . . by alkyl groups containing at least three carbon atoms

C07C 309/38 . . . . formed by at least three rings

C07C 309/39 . . . containing halogen atoms bound to the carbon skeleton

C07C 309/40 . . . containing nitro or nitroso groups bound to the carbon skeleton

C07C 309/41 . . . containing singly-bound oxygen atoms bound to the carbon skeleton

C07C 309/42 . . . . having the sulfo groups bound to carbon atoms of non-condensed six-membered aromatic rings

C07C 309/43 . . . . having at least one of the sulfo groups bound to a carbon atom ofa six-membered aromatic ring being part of a condensed ring system

C07C 309/44 . . . containing doubly-bound oxygen atoms bound to the carbon skeleton

C07C 309/45 . . . containing nitrogen atoms, not being part of nitro or nitroso groups, bound to the carbon skeleton

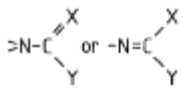
C07C 309/46 . . . . having the sulfo groups bound to carbon atoms of non-condensed six-membered aromatic rings

C07C 309/47 . . . . having at least one of the sulfo groups bound to a carbon atom of a six-membered aromatic ring being part of a condensed ring system

C07C 309/48 . . . . the carbon skeleton being further substituted by halogen atoms

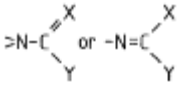
C07C 309/49 . . . . the carbon skeleton being further substituted by singly-bound oxygen atoms

C07C 309/50 . . . . . having at least one of the sulfo groups bound to a carbon atom of a six-membered aromatic ring being part of a condensed ring system

C07C 309/51 . . . . at least one of the nitrogen atoms being part of any of the groups  , X being a hetero atom, Y being any atom

C07C 309/52 . . . . the carbon skeleton being further substituted by doubly-bound oxygen atoms

C07C 309/53 . . . . . the carbon skeleton containing carbon atoms of quinone rings

C07C 309/54 . . . . . at least one of the nitrogen atoms being part of any of the groups  , X being a hetero atom, Y being any atom

C07C 309/55 . . . . . Y being a hydrogen or a carbon atom

C07C 309/56 . . . . . Y being a hetero atom

C07C 309/57 . . . containing carboxyl groups bound to the carbon skeleton

C07C 309/58 . . . . Carboxylic acid groups or esters thereof

C07C 309/59 . . . . Nitrogen analogues of carboxyl groups

C07C 309/60 . . . . the carbon skeleton being further substituted by singly-bound oxygen atoms

C07C 309/61 . . . . the carbon skeleton being further substituted by nitrogen atoms, not being part of nitro or nitroso groups

C07C 309/62 . . Sulfonated fats, oils or waxes of undetermined constitution (chemical modification of petroleum waxes C10G 73/38) {Bituminosulfonic acid C07G 9/00 }

C07C 309/63 . Esters of sulfonic acids

C07C 309/64 . . having sulfur atoms of esterified sulfo groups bound to acyclic carbon atoms

C07C 309/65 . . . of a saturated carbon skeleton

C07C 309/66 . . . . Methanesulfonates

C07C 309/67 . . . of an unsaturated carbon skeleton

C07C 309/68 . . . of a carbon skeleton substituted by singly-bound oxygen atoms

C07C 309/69 . . . of a carbon skeleton substituted by nitrogen atoms, not being part of nitro or nitroso groups

C07C 309/70 . . . of a carbon skeleton substituted by carboxyl groups

C07C 309/71 . . having sulfur atoms of esterified sulfo groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 309/72 . . having sulfur atoms of esterified sulfo groups bound to carbon atoms of six-membered aromatic rings of a carbon skeleton

C07C 309/73 . . . to carbon atoms of non-condensed six-membered aromatic rings

C07C 309/74 . . . to carbon atoms of six-membered aromatic rings being part of condensed ring systems

C07C 309/75 . . . containing singly-bound oxygen atoms bound to the carbon skeleton

C07C 309/76 . . . containing nitrogen atoms, not being part of nitro or nitroso groups, bound to the carbon skeleton

C07C 309/77 . . . containing carboxyl groups bound to the carbon skeleton

C07C 309/78 . Halides of sulfonic acids

C07C 309/79 . . having halosulfonyl groups bound to acyclic carbon atoms

C07C 309/80 . . . of a saturated carbon skeleton

C07C 309/81 . . . of an unsaturated carbon skeleton

C07C 309/82 . . . of a carbon skeleton substituted by singly-bound oxygen atoms

C07C 309/83 . . . of a carbon skeleton substituted by nitrogen atoms, not being part of nitro or nitroso groups

C07C 309/84 . . . of a carbon skeleton substituted by carboxyl groups

C07C 309/85 . . having halosulfonyl groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 309/86 . . having halosulfonyl groups bound to carbon atoms of six-membered aromatic rings of a carbon skeleton

C07C 309/87 . . . containing singly-bound oxygen atoms bound to the carbon skeleton

C07C 309/88 . . . containing nitrogen atoms, not being part of nitro or nitroso groups, bound to the carbon skeleton

C07C 309/89 . . . containing carboxyl groups bound to the carbon skeleton

C07C 311/00 Amides of sulfonic acids, i.e. compounds having singly-bound oxygen atoms of sulfo groups replaced by nitrogen atoms, not being part of nitro or nitroso groups

C07C 311/01 . Sulfonamides having sulfur atoms of sulfonamide groups bound to acyclic carbon atoms

C07C 311/02 . . of an acyclic saturated carbon skeleton

C07C 311/03 . . . having the nitrogen atoms of the sulfonamide groups bound to hydrogen atoms or to acyclic carbon atoms

C07C 311/04 . . . . to acyclic carbon atoms of hydrocarbon radicals substituted by singly-bound oxygen atoms

C07C 311/05 . . . . to acyclic carbon atoms of hydrocarbon radicals substituted by nitrogen atoms, not being part of nitro or nitroso groups

C07C 311/06 . . . . to acyclic carbon atoms of hydrocarbon radicals substituted by carboxyl groups

C07C 311/07 . . . having the nitrogen atom of at least one of the sulfonamide groups bound to a carbon atom of a ring other than a six-membered aromatic ring

C07C 311/08 . . . having the nitrogen atom of at least one of the sulfonamide groups bound to a carbon atom of a six-membered aromatic ring

C07C 311/09 . . . the carbon skeleton being further substituted by at least two halogen atoms

C07C 311/10 . . of a saturated carbon skeleton containing rings

C07C 311/11 . . of an acyclic unsaturated carbon skeleton

C07C 311/12 . . of an unsaturated carbon skeleton containing rings

C07C 311/13 . . . the carbon skeleton containing six-membered aromatic rings

C07C 311/14 . Sulfonamides having sulfur atoms of sulfonamide groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 311/15 . Sulfonamides having sulfur atoms of sulfonamide groups bound to carbon atoms of six-membered aromatic rings

C07C 311/16 . . having the nitrogen atom of at least one of the sulfonamide groups bound to hydrogen atoms or to an acyclic carbon atom

C07C 311/17 . . . to an acyclic carbon atom of a hydrocarbon radical substituted by singly-bound oxygen atoms

C07C 311/18 . . . to an acyclic carbon atom of a hydrocarbon radical substituted by nitrogen atoms, not being part of nitro or nitroso groups

C07C 311/19 . . . to an acyclic carbon atom of a hydrocarbon radical substituted by carboxyl groups

C07C 311/20 . . having the nitrogen atom of at least one of the sulfonamide groups bound to a carbon atom of a ring other than a six-membered aromatic ring

C07C 311/21 . . having the nitrogen atom of at least one of the sulfonamide groups bound to a carbon atom of a six-membered aromatic ring

C07C 311/22 . Sulfonamides, the carbon skeleton of the acid part being further substituted by singly-bound oxygen atoms

C07C 311/23 . . having the sulfur atoms of the sulfonamide groups bound to acyclic carbon atoms

C07C 311/24 . . . of an acyclic saturated carbon skeleton

C07C 311/25 . . . of a saturated carbon skeleton containing rings

C07C 311/26 . . . of an acyclic unsaturated carbon skeleton

C07C 311/27 . . . of an unsaturated carbon skeleton containing rings

C07C 311/28 . . having the sulfur atom of at least one of the sulfonamide groups bound to a carbon atom of a ring other than a six-membered aromatic ring

C07C 311/29 . . having the sulfur atom of at least one of the sulfonamide groups bound to a carbon atom of a six-membered aromatic ring

C07C 311/30 . Sulfonamides, the carbon skeleton of the acid part being further substituted by singly-bound nitrogen atoms, not being part of nitro or nitroso groups

C07C 311/31 . . having the sulfur atoms of the sulfonamide groups bound to acyclic carbon atoms

C07C 311/32 . . . of an acyclic saturated carbon skeleton

C07C 311/33 . . . of a saturated carbon skeleton containing rings

C07C 311/34 . . . of an acyclic unsaturated carbon skeleton

C07C 311/35 . . . of an unsaturated carbon skeleton containing rings

C07C 311/36 . . having the sulfur atom of at least one of the sulfonamide groups bound to a carbon atom of a ring other than a six-membered aromatic ring

C07C 311/37 . . having the sulfur atom of at least one of the sulfonamide groups bound to a carbon atom of a six-membered aromatic ring

C07C 311/38 . . . having sulfur atoms of sulfonamide groups and amino groups bound to carbon atoms of six-membered rings of the same carbon skeleton

C07C 311/39 . . . . having the nitrogen atom of at least one of the sulfonamide groups bound to hydrogen atoms or to an acyclic carbon atom

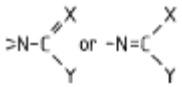
C07C 311/40 . . . . . to an acyclic carbon atom of a hydrocarbon radical substituted by singly-bound oxygen atoms

C07C 311/41 . . . . . to an acyclic carbon atom of a hydrocarbon radical substituted by nitrogen atoms, not being part of nitro or nitroso groups

C07C 311/42 . . . . . to an acyclic carbon atom of a hydrocarbon radical substituted by carboxyl groups

C07C 311/43 . . . . having the nitrogen atom of at least one of the sulfonamide groups bound to a carbon atom of a ring other than a six-membered aromatic ring

C07C 311/44 . . . . having the nitrogen atom of at least one of the sulfonamide groups bound to a carbon atom of a six-membered aromatic ring

C07C 311/45 . . at least one of the singly-bound nitrogen atoms being part of any of the groups  , X being a hetero atom, Y being any atom, e.g.

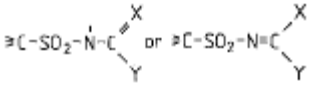
N-acylaminosulfonamides

C07C 311/46 . . . Y being a hydrogen or a carbon atom

C07C 311/47 . . . Y being a hetero atom

C07C 311/48 . having nitrogen atoms of sulfonamide groups further bound to another hetero atom

C07C 311/49 . . to nitrogen atoms

C07C 311/50 . Compounds containing any of the groups  , X being a hetero atom, Y being any atom

C07C 311/51 .. Y being a hydrogen or a carbon atom

C07C 311/52 .. Y being a hetero atom

C07C 311/53 ... X and Y not being nitrogen atoms, e.g. N-sulfonylcarbamic acid

C07C 311/54 ... either X or Y, but not both, being nitrogen atoms, e.g. N-sulfonylurea

C07C 311/55 .... having sulfur atoms of the sulfonylurea groups bound to acyclic carbon atoms

C07C 311/56 .... having sulfur atoms of the sulfonylurea groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 311/57 .... having sulfur atoms of the sulfonylurea groups bound to carbon atoms of six-membered aromatic rings

C07C 311/58 ..... having nitrogen atoms of the sulfonylurea groups bound to hydrogen atoms or to acyclic carbon atoms

C07C 311/59 ..... having nitrogen atoms of the sulfonylurea groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 311/60 ..... having nitrogen atoms of the sulfonylurea groups bound to carbon atoms of six-membered aromatic rings

C07C 311/61 ..... having nitrogen atoms of the sulfonylurea groups further bound to another hetero atom

C07C 311/62 ..... having nitrogen atoms of the sulfonylurea groups further acylated

C07C 311/63 .... N-sulfonylisoureas

C07C 311/64 ... X and Y being nitrogen atoms, e.g. N-sulfonylguanidine

C07C 311/65 . N-sulfonylisocyanates

C07C 313/00 **Sulfinic acids**
Sulfenic acids
Halides, esters or anhydrides thereof
Amides of sulfinic or sulfenic acids, i.e. compounds having singly-bound oxygen atoms of sulfinic or sulfenic groups replaced by nitrogen atoms, not being part of nitro or nitroso groups

C07C 313/02 . Sulfinic acids
Derivatives thereof

C07C 313/04 .. Sulfinic acids
Esters thereof

C07C 313/06 .. Sulfinamides

C07C 313/08 . Sulfenic acids
Derivatives thereof

C07C 313/10 .. Sulfenic acids
Esters thereof

C07C 313/12 ... having sulfur atoms of sulfenic groups bound to acyclic carbon atoms

C07C 313/14 ... having sulfur atoms of sulfenic groups bound to carbon atoms of rings other than six-membered aromatic rings

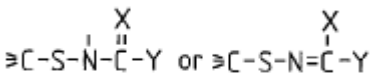
C07C 313/16 ... having sulfur atoms of sulfenic groups bound to carbon atoms of six-membered aromatic rings

C07C 313/18 .. Sulfenamides

C07C 313/20 ... having sulfur atoms of sulfenamide groups bound to acyclic carbon atoms

C07C 313/22 . . . having sulfur atoms of sulfenamide groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 313/24 . . . having sulfur atoms of sulfenamide groups bound to carbon atoms of six-membered aromatic rings

C07C 313/26 . . . Compounds containing any of the groups  , X being a hetero atom, Y being any atom

C07C 313/28 . . . . Y being a hydrogen or a carbon atom

C07C 313/30 . . . . Y being a hetero atom

C07C 313/32 . . . . . X and Y not being nitrogen atoms, e.g. N-sulfenylcarbamic acid

C07C 313/34 . . . . . either X or Y, but not both, being nitrogen atoms, e.g. N-sulfenylureas

C07C 313/36 . . . having nitrogen atoms of sulfenamide groups further bound to other hetero atoms

C07C 313/38 . . . N-sulfenylisocyanates

C07C 315/00 Preparation of sulfones
Preparation of sulfoxides

C07C 315/02 . by formation of sulfone or sulfoxide groups by oxidation of sulfides, or by formation of sulfone groups by oxidation of sulfoxides

C07C 315/04 . by reactions not involving the formation of sulfone or sulfoxide groups

C07C 315/06 . Separation
Purification
Stabilisation
Use of additives

C07C 317/00 Sulfones
Sulfoxides

C07C 317/02 . having sulfone or sulfoxide groups bound to acyclic carbon atoms

C07C 317/04 . . of an acyclic saturated carbon skeleton

C07C 317/06 . . of a saturated carbon skeleton containing rings

C07C 317/08 . . of an acyclic unsaturated carbon skeleton

C07C 317/10 . . of an unsaturated carbon skeleton containing rings

C07C 317/12 . having sulfone or sulfoxide groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 317/14 . having sulfone or sulfoxide groups bound to carbon atoms of six-membered aromatic rings

C07C 317/16 . having sulfone or sulfoxide groups and singly-bound oxygen atoms bound to the same carbon skeleton

C07C 317/18 . . with sulfone or sulfoxide groups bound to acyclic carbon atoms of the carbon skeleton

C07C 317/20 . . with sulfone or sulfoxide groups bound to carbon atoms of rings other than

six-membered aromatic rings of the carbon skeleton

C07C 317/22 .. with sulfone or sulfoxide groups bound to carbon atoms of six-membered aromatic rings of the carbon skeleton

C07C 317/24 . having sulfone or sulfoxide groups and doubly-bound oxygen atoms bound to the same carbon skeleton

C07C 317/26 . having sulfone or sulfoxide groups and nitrogen atoms, not being part of nitro or nitroso groups, bound to the same carbon skeleton

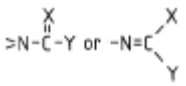
C07C 317/28 .. with sulfone or sulfoxide groups bound to acyclic carbon atoms of the carbon skeleton

C07C 317/30 .. with sulfone or sulfoxide groups bound to carbon atoms of rings other than six-membered aromatic rings of the carbon skeleton

C07C 317/32 .. with sulfone or sulfoxide groups bound to carbon atoms of six-membered aromatic rings of the carbon skeleton

C07C 317/34 ... having sulfone or sulfoxide groups and amino groups bound to carbon atoms of six-membered aromatic rings being part of the same non-condensed ring or of a condensed ring system containing that ring

C07C 317/36 .... with the nitrogen atoms of the amino groups bound to hydrogen atoms or to carbon atoms

C07C 317/38 .... with the nitrogen atom of at least one amino group being part of any of the groups  , X being a hetero atom, Y being any atom, e.g. N-acylaminosulfones

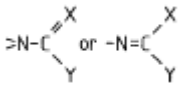
C07C 317/40 ..... Y being a hydrogen or a carbon atom

C07C 317/42 ..... Y being a hetero atom

C07C 317/44 . having sulfone or sulfoxide groups and carboxyl groups bound to the same carbon skeleton

C07C 317/46 .. the carbon skeleton being further substituted by singly-bound oxygen atoms

C07C 317/48 .. the carbon skeleton being further substituted by singly-bound nitrogen atoms, not being part of nitro or nitroso groups

C07C 317/50 ... at least one of the nitrogen atoms being part of any of the groups  , X being a hetero atom, Y being any atom

C07C 319/00 Preparation of thiols, sulfides, hydropolysulfides or polysulfides

C07C 319/02 . of thiols

C07C 319/04 .. by addition of hydrogen sulfide or its salts to unsaturated compounds

C07C 319/06 .. from sulfides, hydropolysulfides or polysulfides

C07C 319/08 .. by replacement of hydroxy groups or etherified or esterified hydroxy groups

C07C 319/10 ... by replacement of hydroxy groups or etherified or esterified hydroxy groups bound to carbon atoms of six-membered aromatic rings

C07C 319/12 .. by reactions not involving the formation of mercapto groups

C07C 319/14 . of sulfides

C07C 319/16 . . by addition of hydrogen sulfide or its salts to unsaturated compounds

C07C 319/18 . . by addition of thiols to unsaturated compounds

C07C 319/20 . . by reactions not involving the formation of sulfide groups

C07C 319/22 . of hydropolysulfides or polysulfides

C07C 319/24 . . by reactions involving the formation of sulfur-to-sulfur bonds

C07C 319/26 . Separation
Purification
Stabilisation
Use of additives

C07C 319/28 . . Separation
Purification

C07C 319/30 . . . from the by-products of refining mineral oils

C07C 321/00 Thiols, sulfides, hydropolysulfides or polysulfides

C07C 321/02 . Thiols having mercapto groups bound to acyclic carbon atoms

C07C 321/04 . . of an acyclic saturated carbon skeleton

C07C 321/06 . . of a saturated carbon skeleton containing rings

C07C 321/08 . . of an acyclic unsaturated carbon skeleton

C07C 321/10 . . of an unsaturated carbon skeleton containing rings

C07C 321/12 . Sulfides, hydropolysulfides, or polysulfides having thio groups bound to acyclic carbon atoms

C07C 321/14 . . of an acyclic saturated carbon skeleton

C07C 321/16 . . of a saturated carbon skeleton containing rings

C07C 321/18 . . of an acyclic unsaturated carbon skeleton

C07C 321/20 . . of an unsaturated carbon skeleton containing rings

C07C 321/22 . Thiols, sulfides, hydropolysulfides, or polysulfides having thio groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 321/24 . Thiols, sulfides, hydropolysulfides, or polysulfides having thio groups bound to carbon atoms of six-membered aromatic rings

C07C 321/26 . . Thiols

C07C 321/28 . . Sulfides, hydropolysulfides, or polysulfides having thio groups bound to carbon atoms of six-membered aromatic rings

C07C 321/30 . . . Sulfides having the sulfur atom of at least one thio group bound to two carbon atoms of six-membered aromatic rings

C07C 323/00 Thiols, sulfides, hydropolysulfides or polysulfides substituted by halogen, oxygen or nitrogen atoms, or by sulfur atoms not being part of thio groups

C07C 323/01 . containing thio groups and halogen atoms, or nitro or nitroso groups bound to the same carbon skeleton

C07C 323/02 . . having sulfur atoms of thio groups bound to acyclic carbon atoms of the carbon skeleton

C07C 323/03 . . . the carbon skeleton being acyclic and saturated

C07C 323/04 . . . the carbon skeleton being saturated and containing rings

C07C 323/05 . . . the carbon skeleton being acyclic and unsaturated

C07C 323/06 . . . the carbon skeleton being unsaturated and containing rings other than six-membered aromatic rings

C07C 323/07 . . . the carbon skeleton containing six-membered aromatic rings

C07C 323/08 . . having sulfur atoms of thio groups bound to carbon atoms of rings other than six-membered aromatic rings of the carbon skeleton

C07C 323/09 . . having sulfur atoms of thio groups bound to carbon atoms of six-membered aromatic rings of the carbon skeleton

C07C 323/10 . containing thio groups and singly-bound oxygen atoms bound to the same carbon skeleton

C07C 323/11 . . having the sulfur atoms of the thio groups bound to acyclic carbon atoms of the carbon skeleton

C07C 323/12 . . . the carbon skeleton being acyclic and saturated

C07C 323/13 . . . the carbon skeleton being saturated and containing rings

C07C 323/14 . . . the carbon skeleton being acyclic and unsaturated

C07C 323/15 . . . the carbon skeleton being unsaturated and containing rings other than six-membered aromatic rings

C07C 323/16 . . . the carbon skeleton containing six-membered aromatic rings

C07C 323/17 . . having the sulfur atom of at least one of the thio groups bound to a carbon atom of a ring other than a six-membered aromatic ring of the carbon skeleton

C07C 323/18 . . having the sulfur atom of at least one of the thio groups bound to a carbon atom of a six-membered aromatic ring of the carbon skeleton

C07C 323/19 . . . with singly-bound oxygen atoms bound to acyclic carbon atoms of the carbon skeleton

C07C 323/20 . . . with singly-bound oxygen atoms bound to carbon atoms of the same non-condensed six-membered aromatic ring

C07C 323/21 . . . with the sulfur atom of the thio group bound to a carbon atom of a six-membered aromatic ring being part of a condensed ring system

C07C 323/22 . containing thio groups and doubly-bound oxygen atoms bound to the same carbon skeleton

C07C 323/23 . containing thio groups and nitrogen atoms, not being part of nitro or nitroso groups, bound to the same carbon skeleton

C07C 323/24 . . having the sulfur atoms of the thio groups bound to acyclic carbon atoms of the carbon skeleton

C07C 323/25 . . . the carbon skeleton being acyclic and saturated

C07C 323/26 . . . the carbon skeleton being saturated and containing rings

C07C 323/27 . . . the carbon skeleton being acyclic and unsaturated

C07C 323/28 . . . the carbon skeleton being unsaturated and containing rings other than six-membered aromatic rings

C07C 323/29 . . . the carbon skeleton containing six-membered aromatic rings

C07C 323/30 . . having the sulfur atom of at least one of the thio groups bound to a carbon atom of a ring other than a six-membered aromatic ring of the carbon skeleton

C07C 323/31 . . having the sulfur atom of at least one of the thio groups bound to a carbon atom of

a six-membered aromatic ring of the carbon skeleton

C07C 323/32 . . . having at least one of the nitrogen atoms bound to an acyclic carbon atom of the carbon skeleton

C07C 323/33 . . . having at least one of the nitrogen atoms bound to a carbon atom of the same non-condensed six-membered aromatic ring

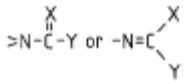
C07C 323/34 . . . . the thio group being a mercapto group

C07C 323/35 . . . . the thio group being a sulfide group

C07C 323/36 . . . . . the sulfur atom of the sulfide group being further bound to an acyclic carbon atom

C07C 323/37 . . . . . the sulfur atom of the sulfide group being further bound to a carbon atom of a six-membered aromatic ring

C07C 323/38 . . . with the sulfur atom of the thio group bound to a carbon atom of a six-membered aromatic ring being part of a condensed ring system

C07C 323/39 . . at least one of the nitrogen atoms being part of any of the groups 

, X being a hetero atom, Y being any atom

C07C 323/40 . . . Y being a hydrogen or a carbon atom

C07C 323/41 . . . . Y being a hydrogen or an acyclic carbon atom

C07C 323/42 . . . . Y being a carbon atom of a six-membered aromatic ring

C07C 323/43 . . . Y being a hetero atom

C07C 323/44 . . . . X or Y being nitrogen atoms

C07C 323/45 . . having at least one of the nitrogen atoms doubly-bound to the carbon skeleton

C07C 323/46 . . having at least one of the nitrogen atoms, not being part of nitro or nitroso groups, further bound to other hetero atoms

C07C 323/47 . . . to oxygen atoms

C07C 323/48 . . . to nitrogen atoms

C07C 323/49 . . . to sulfur atoms

C07C 323/50 . containing thio groups and carboxyl groups bound to the same carbon skeleton

C07C 323/51 . . having the sulfur atoms of the thio groups bound to acyclic carbon atoms of the carbon skeleton

C07C 323/52 . . . the carbon skeleton being acyclic and saturated

C07C 323/53 . . . the carbon skeleton being saturated and containing rings

C07C 323/54 . . . the carbon skeleton being acyclic and unsaturated

C07C 323/55 . . . the carbon skeleton being unsaturated and containing rings other than six-membered aromatic rings

C07C 323/56 . . . the carbon skeleton containing six-membered aromatic rings

C07C 323/57 . . . the carbon skeleton being further substituted by nitrogen atoms, not being part of nitro or nitroso groups

C07C 323/58 . . . . with amino groups bound to the carbon skeleton

C07C 323/59 . . . . . with acylated amino groups bound to the carbon skeleton

C07C 323/60 . . . with the carbon atom of at least one of the carboxyl groups bound to nitrogen atoms

C07C 323/61 . . having the sulfur atom of at least one of the thio groups bound to a carbon atom of a ring other than a six-membered aromatic ring of the carbon skeleton

C07C 323/62 . . having the sulfur atom of at least one of the thio groups bound to a carbon atom of a six-membered aromatic ring of the carbon skeleton

C07C 323/63 . . . the carbon skeleton being further substituted by nitrogen atoms, not being part of nitro or nitroso groups

C07C 323/64 . containing thio groups and sulfur atoms, not being part of thio groups, bound to the same carbon skeleton

C07C 323/65 . . containing sulfur atoms of sulfone or sulfoxide groups bound to the carbon skeleton

C07C 323/66 . . containing sulfur atoms of sulfo, esterified sulfo or halosulfonyl groups, bound to the carbon skeleton

C07C 323/67 . . containing sulfur atoms of sulfonamide groups, bound to the carbon skeleton

C07C 325/00 Thioaldehydes
Thioketones
Thioquinones
Oxides thereof

C07C 325/02 . Thioketones
Oxides thereof

C07C 325/04 . Thioquinones
Oxides thereof

C07C 327/00 Thiocarboxylic acids

C07C 327/02 . Monothiocarboxylic acids

C07C 327/04 . . having carbon atoms of thiocarboxyl groups bound to hydrogen atoms or to acyclic carbon atoms

C07C 327/06 . . . to hydrogen atoms or to carbon atoms of an acyclic saturated carbon skeleton

C07C 327/08 . . . to carbon atoms of a saturated carbon skeleton containing rings

C07C 327/10 . . . to carbon atoms of an acyclic unsaturated carbon skeleton

C07C 327/12 . . . to carbon atoms of an unsaturated carbon skeleton containing rings

C07C 327/14 . . having carbon atoms of thiocarboxyl groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 327/16 . . having carbon atoms of thiocarboxyl groups bound to carbon atoms of six-membered aromatic rings

C07C 327/18 . Dithiocarboxylic acids

C07C 327/20 . Esters of monothiocarboxylic acids

C07C 327/22 . . having carbon atoms of esterified thiocarboxyl groups bound to hydrogen atoms or to acyclic carbon atoms

C07C 327/24 . . having carbon atoms of esterified thiocarboxyl groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 327/26 . . having carbon atoms of esterified thiocarboxyl groups bound to carbon atoms of six-membered aromatic rings

C07C 327/28 . . having sulfur atoms of esterified thiocarboxyl groups bound to carbon atoms of hydrocarbon radicals substituted by singly-bound oxygen atoms

C07C 327/30 . . having sulfur atoms of esterified thiocarboxyl groups bound to carbon atoms of hydrocarbon radicals substituted by nitrogen atoms, not being part of nitro or nitroso groups

C07C 327/32 . . having sulfur atoms of esterified thiocarboxyl groups bound to carbon atoms of hydrocarbon radicals substituted by carboxyl groups

C07C 327/34 . . . with amino groups bound to the same hydrocarbon radicals

C07C 327/36 . Esters of dithiocarboxylic acids

C07C 327/38 . Amides of thiocarboxylic acids

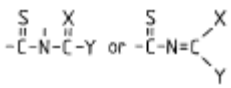
C07C 327/40 . . having carbon atoms of thiocarboxamide groups bound to hydrogen atoms or to acyclic carbon atoms

C07C 327/42 . . . to hydrogen atoms or to carbon atoms of a saturated carbon skeleton

C07C 327/44 . . . to carbon atoms of an unsaturated carbon skeleton

C07C 327/46 . . having carbon atoms of thiocarboxamide groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 327/48 . . having carbon atoms of thiocarboxamide groups bound to carbon atoms of six-membered aromatic rings

C07C 327/50 . . Compounds containing any of the groups  , X being a hetero atom, Y being any atom

C07C 327/52 . . . Y being a hydrogen or a carbon atom

C07C 327/54 . . . Y being a hetero atom

C07C 327/56 . . having nitrogen atoms of thiocarboxamide groups further bound to another hetero atom

C07C 327/58 . Derivatives of thiocarboxylic acids, the doubly-bound oxygen atoms being replaced by nitrogen atoms, e.g. imino-thio ethers

C07C 327/60 . Thiocarboxylic acids having sulfur atoms of thiocarboxyl groups further doubly-bound to oxygen atoms

C07C 329/00 Thiocarbonic acids
Halides, esters or anhydrides thereof

C07C 329/02 . Monothiocarbonic acids
Derivatives thereof

C07C 329/04 . . Esters of monothiocarbonic acids

C07C 329/06 . . . having sulfur atoms of thiocarbonic groups bound to acyclic carbon atoms

C07C 329/08 . . . having sulfur atoms of thiocarbonic groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 329/10 . . . having sulfur atoms of thiocarbonic groups bound to carbon atoms of six-membered aromatic rings

C07C 329/12 . Dithiocarbonic acids
Derivatives thereof

C07C 329/14 . . Esters of dithiocarbonic acids

C07C 329/16 . . . having sulfur atoms of dithiocarbonic groups bound to acyclic carbon atoms

C07C 329/18 . . . having sulfur atoms of dithiocarbonic groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 329/20 . . . having sulfur atoms of dithiocarbonic groups bound to carbon atoms of six-membered aromatic rings

C07C 331/00 Derivatives of thiocyanic acid or of isothiocyanic acid

C07C 331/02 . Thiocyanates

C07C 331/04 . . having sulfur atoms of thiocyanate groups bound to acyclic carbon atoms

C07C 331/06 . . having sulfur atoms of thiocyanate groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 331/08 . . having sulfur atoms of thiocyanate groups bound to carbon atoms of six-membered aromatic rings

C07C 331/10 . . having sulfur atoms of thiocyanate groups bound to carbon atoms of hydrocarbon radicals substituted by singly-bound oxygen atoms

C07C 331/12 . . having sulfur atoms of thiocyanate groups bound to carbon atoms of hydrocarbon radicals substituted by nitrogen atoms, not being part of nitro or nitroso groups

C07C 331/14 . . having sulfur atoms of thiocyanate groups bound to carbon atoms of hydrocarbon radicals substituted by carboxyl groups

C07C 331/16 . Isothiocyanates

C07C 331/18 . . having isothiocyanate groups bound to acyclic carbon atoms

C07C 331/20 . . . of a saturated carbon skeleton

C07C 331/22 . . . of an unsaturated carbon skeleton

C07C 331/24 . . . . the carbon skeleton containing six-membered aromatic rings

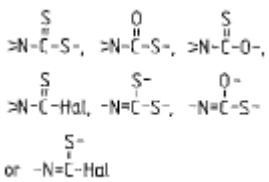
C07C 331/26 . . having isothiocyanate groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 331/28 . . having isothiocyanate groups bound to carbon atoms of six-membered aromatic rings

C07C 331/30 . . containing at least two isothiocyanate groups bound to the same carbon skeleton

C07C 331/32 . . having isothiocyanate groups acylated

C07C 333/00 Derivatives of thiocarbamic acids, i.e. compounds containing any of the groups



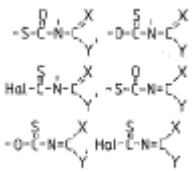
, the nitrogen atom not being part of nitro or nitroso groups

C07C 333/02 . Monothiocarbamic acids
Derivatives thereof

C07C 333/04 . . having nitrogen atoms of thiocarbamic groups bound to hydrogen atoms or to acyclic carbon atoms

C07C 333/06 . . having nitrogen atoms of thiocarbamic groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 333/08 . . having nitrogen atoms of thiocarbamic groups bound to carbon atoms of six-membered aromatic rings

C07C 333/10 . . having nitrogen atoms of thiocarbamic groups being part of any of the groups  , X being a hetero atom, Y being any atom, e.g.,

N-acyl-thiocarbamates

C07C 333/12 . . having nitrogen atoms of thiocarbamic groups bound to other hetero atoms

C07C 333/14 . Dithiocarbamic acids
Derivatives thereof

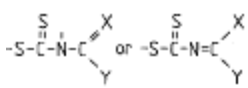
C07C 333/16 . . Salts of dithiocarbamic acids

C07C 333/18 . . Esters of dithiocarbamic acids

C07C 333/20 . . . having nitrogen atoms of dithiocarbamate groups bound to hydrogen atoms or to acyclic carbon atoms

C07C 333/22 . . . having nitrogen atoms of dithiocarbamate groups bound to carbon atoms of rings other than six-membered aromatic rings

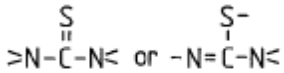
C07C 333/24 . . . having nitrogen atoms of dithiocarbamate groups bound to carbon atoms of six-membered aromatic rings

C07C 333/26 . . . containing any of the groups  , X being a hetero atom, Y being any atom, e.g. N-acyldithiocarbamates

C07C 333/28 . . . having nitrogen atoms of dithiocarbamate groups bound to other hetero atoms

C07C 333/30 . . having sulfur atoms of dithiocarbamic groups bound to other sulfur atoms

C07C 333/32 . . . Thiuramsulfides
Thiurampolysulfides

C07C 335/00 Thioureas, i.e. compounds containing any of the groups  ,

the nitrogen atoms not being part of nitro or nitroso groups

C07C 335/02 . Thiourea

C07C 335/04 . Derivatives of thiourea

C07C 335/06 . . having nitrogen atoms of thiourea groups bound to acyclic carbon atoms

C07C 335/08 . . . of a saturated carbon skeleton

C07C 335/10 . . . of an unsaturated carbon skeleton

C07C 335/12 . . . . the carbon skeleton containing six-membered aromatic rings

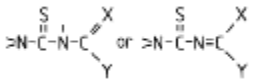
C07C 335/14 . . having nitrogen atoms of thiourea groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 335/16 . . having nitrogen atoms of thiourea groups bound to carbon atoms of six-membered aromatic rings of a carbon skeleton

C07C 335/18 . . . being further substituted by singly-bound oxygen atoms

C07C 335/20 . . . being further substituted by nitrogen atoms, not being part of nitro or nitroso groups

C07C 335/22 . . . being further substituted by carboxyl groups

C07C 335/24 . . containing any of the groups  , X being a hetero atom, Y being any atom

C07C 335/26 . . . Y being a hydrogen or a carbon atom, e.g. benzoylthioureas

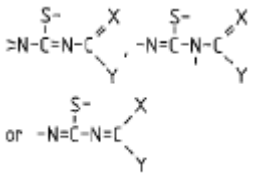
C07C 335/28 . . . Y being a hetero atom, e.g. thiobiuret

C07C 335/30 . Isothioureas

C07C 335/32 . . having sulfur atoms of isothiourea groups bound to acyclic carbon atoms

C07C 335/34 . . having sulfur atoms of isothiourea groups bound to carbon atoms of rings other than six-membered aromatic rings

C07C 335/36 . . having sulfur atoms of isothiourea groups bound to carbon atoms of six-membered aromatic rings

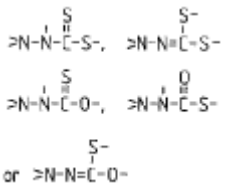
C07C 335/38 . . containing any of the groups  , X being a hetero atom, Y being any atom

C07C 335/40 . having nitrogen atoms of thiourea or isothiourea groups further bound to other hetero atoms

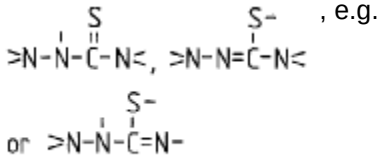
C07C 335/42 . . Sulfonylthioureas
Sulfonylisothioureas

C07C 335/44 . . Sulfenylthioureas
Sulfenylisothioureas

C07C 337/00 Derivatives of thiocarbonic acids containing functional groups covered by groups C07C 333/00 or C07C 335/00 in which at least one nitrogen atom of these functional groups is further bound to another nitrogen atom not being part of a nitro or nitroso group

C07C 337/02 . Compounds containing any of the groups  , e.g. thiocarbazates

C07C 337/04 . . the other nitrogen atom being further doubly-bound to a carbon atom

C07C 337/06 . Compounds containing any of the groups  , e.g. thiosemicarbazides

C07C 337/08 . . the other nitrogen atom being further doubly-bound to a carbon atom, e.g.

thiosemicarbazones

C07C 337/10 . the two nitrogen atoms of the functional groups being doubly-bound to each other

C07C 381/00 Compounds containing carbon and sulfur and having functional groups not covered by groups C07C 301/00 to C07C 337/00

C07C 381/02 . Thiosulfates

C07C 381/04 . Thiosulfonates

C07C 381/06 . Compounds containing sulfur atoms only bound to two nitrogen atoms

C07C 381/08 . . having at least one of the nitrogen atoms acylated

C07C 381/10 . Compounds containing sulfur atoms doubly-bound to nitrogen atoms

C07C 381/12 . Sulfonium compounds

C07C 381/14 . Compounds containing a carbon atom having four bonds to hetero atoms with a double bond to one hetero atom and at least one bond to a sulfur atom further doubly-bound to oxygen atoms

C07C 391/00 Compounds containing selenium

C07C 391/02 . having selenium atoms bound to carbon atoms of six-membered aromatic rings

C07C 395/00 Compounds containing tellurium

C07C 401/00 Irradiation products of cholesterol or its derivatives
Vitamin D derivatives, 9,10-seco cyclopenta[a]phenanthrene or analogues obtained by chemical preparation without irradiation

C07C 403/00 Derivatives of cyclohexane or of a cyclohexene { or of cyclohexadiene }**, having a side-chain containing an acyclic unsaturated part of at least four carbon atoms, this part being directly attached to the cyclohexane or cyclohexene** { or cyclohexadiene } **rings, e.g. vitamin A, beta-carotene, beta-ionone**

C07C 403/02 . having side-chains containing only carbon and hydrogen atoms

C07C 403/04 . having side-chains substituted by halogen atoms

C07C 403/06 . having side-chains substituted by singly-bound oxygen atoms

C07C 403/08 . . by hydroxy groups

C07C 403/10 . . by etherified hydroxy groups

C07C 403/12 . . by esterified hydroxy groups

C07C 403/14 . having side-chains substituted by doubly-bound oxygen atoms

C07C 403/16 . . not being part of -CHO groups

C07C 403/18 . having side-chains substituted by nitrogen atoms

C07C 403/20 . having side-chains substituted by carboxyl groups { or halides, anhydrides, or (thio)esters thereof }

C07C 403/22 . having side-chains substituted by sulfur atoms

C07C 403/24 . having side-chains substituted by six-membered non-aromatic rings, e.g. beta-carotene

C07C 405/00 **Compounds containing a five-membered ring having two side-chains in ortho position to each other, and having oxygen atoms directly attached to the ring in ortho position to one of the side-chains, one side-chain containing, not directly attached to the ring, a carbon atom having three bonds to hetero atoms with at the most one to halogen, and the other side-chain having oxygen atoms attached in gamma-position to the ring, e.g. prostaglandins** {Analogues or derivatives thereof }

C07C 405/0008 . {Analogues having the carboxyl group in the side-chains replaced by other functional groups }

C07C 405/0016 . . {containing only hydroxy, etherified or esterified hydroxy groups }

C07C 405/0025 . . {containing keto groups }

C07C 405/0033 . . {containing sulfur }

C07C 405/0041 . . {containing nitrogen }

C07C 405/005 . {Analogues or derivatives having the five membered ring replaced by other rings }

C07C 405/0058 . . {having the side-chains or their analogues or derivatives attached to a not condensed ring different from a five-membered ring (five-membered ring see 124 CA and sub-groups) }

C07C 405/0066 . . . {to a six-membered ring }

C07C 405/0075 . . {having the side-chains or their analogues or derivatives attached to a condensed ring system }

C07C 405/0083 . . . {which is only ortho or peri condensed, e.g. carbacyclins }

C07C 405/0091 . . . {which is bridged condensed }

C07C 407/00 **Preparation of peroxy compounds**

C07C 407/003 . {Separation; Purification; Stabilisation; Use of additives }

C07C 407/006 . . { Stabilisation; Use of additives }

C07C 409/00 **Peroxy compounds**

C07C 409/02 . the -O-O- group being bound between a carbon atom, not further substituted by oxygen atoms, and hydrogen, i.e. hydroperoxides

C07C 409/04 . . the carbon atom being acyclic

C07C 409/06 . . . Compounds containing rings other than six-membered aromatic rings

C07C 409/08 . . . Compounds containing six-membered aromatic rings

C07C 409/10 . . . . Cumene hydroperoxide

C07C 409/12 .... with two alpha,alpha-dialkylmethyl hydroperoxy groups bound to carbon atoms of the same six-membered aromatic ring

C07C 409/14 .. the carbon atom belonging to a ring other than a six-membered aromatic ring

C07C 409/16 . the -O-O- group being bound between two carbon atoms not further substituted by oxygen atoms, i.e. peroxides

C07C 409/18 .. at least one of the carbon atoms belonging to a ring other than a six-membered aromatic ring

C07C 409/20 . the -O-O- group being bound to a carbon atom further substituted by singly-bound oxygen atoms

C07C 409/22 .. having two -O-O- groups bound to the carbon atom

C07C 409/24 . the -O-O- group being bound between a >C=O group and hydrogen, i.e. peroxy acids

C07C 409/26 .. Peracetic acid

C07C 409/28 .. a >C=O group being bound to a carbon atom of a ring other than a six-membered aromatic ring

C07C 409/30 .. a >C=O group being bound to a carbon atom of a six-membered aromatic ring

C07C 409/32 . the -O-O- group being bound between two >C=O groups

C07C 409/34 .. both belonging to carboxylic acids

C07C 409/36 ... Diacetyl peroxide

C07C 409/38 . the -O-O- group being bound between a >C=O group and a carbon atom, not further substituted by oxygen atoms, i.e. esters of peroxy acids

C07C 409/40 . containing nitrogen atoms

C07C 409/42 . containing sulfur atoms

C07C 409/44 .. with sulfur atoms directly bound to the -O-O- groups, e.g. persulfonic acids

Guide heading:

C07C 2101/00 Systems containing only non-condensed rings

C07C 2101/02 . with a three-membered ring

C07C 2101/04 . with a four-membered ring

C07C 2101/06 . with a five-membered ring

C07C 2101/08 .. The ring being saturated

C07C 2101/10 .. The ring being unsaturated

C07C 2101/12 . with a six-membered ring

C07C 2101/14 .. The ring being saturated

C07C 2101/16 .. The ring being unsaturated

C07C 2101/18 . with a ring being at least seven-membered

C07C 2101/20 .. The ring being twelve-membered

Guide heading:

C07C 2102/00 Systems containing two condensed rings

C07C 2102/02 . The rings having only two atoms in common
C07C 2102/04 .. One of the condensed rings being a six-membered aromatic ring
C07C 2102/06 ... The other ring being four-membered
C07C 2102/08 ... The other ring being five-membered (e.g. indane)
C07C 2102/10 ... The other ring being six-membered (e.d. tetraline)
C07C 2102/12 ... The other ring being at least seven-membered
C07C 2102/14 .. All rings being cycloaliphatic
C07C 2102/16 ... The ring system contains five carbon atoms
C07C 2102/18 ... The ring system contains six carbon atoms
C07C 2102/20 ... The ring system contains seven carbon atoms
C07C 2102/22 ... The ring system contains eight carbon atoms (e.g. pentalene)
C07C 2102/24 ... The ring system contains nine carbon atoms (e.g. perhydroindane)
C07C 2102/26 ... The ring system contains ten carbon atoms
C07C 2102/28 .... Hydrogenated naphthalenes
C07C 2102/30 .... (Hydrogenated) azulenes
C07C 2102/32 ... The ring system contains at least eleven carbon atoms
C07C 2102/34 .... (Hydrogenated) heptalenes

C07C 2102/36 . The rings having more than two atoms in common
C07C 2102/38 .. The bicyclo ring system contains five carbon atoms
C07C 2102/40 .. The bicyclo ring system contains six carbon atoms
C07C 2102/42 .. The bicyclo ring system contains seven carbon atoms
C07C 2102/44 .. The bicyclo ring system contains eight carbon atoms
C07C 2102/46 .. The bicyclo ring system contains nine carbon atoms
C07C 2102/48 .. The bicyclo ring system contains ten carbon atoms

C07C 2102/50 . Spiro compounds

C07C 2103/00 Systems containing at least three condensed rings

C07C 2103/02 . Ortho- or ortho- and peri-condensed systems
C07C 2103/04 .. containing three rings
C07C 2103/06 ... containing at least one ring with less than six ring members
C07C 2103/08 .... containing three- or four-membered rings
C07C 2103/10 .... containing five-membered rings
C07C 2103/12 ..... only one five-membered ring
C07C 2103/14 ..... (Hydrogenated) benz[f]indenes

C07C 2103/16 . . . . . (Hydrogenated) benz[e]indenes
C07C 2103/18 . . . . . (Hydrogenated) fluorenes
C07C 2103/20 . . . . . (Hydrogenated) acenaphthenes
C07C 2103/22 . . . containing only six-membered rings
C07C 2103/24 . . . . (Hydrogenated) anthracenes
C07C 2103/26 . . . . (Hydrogenated) phenanthrenes
C07C 2103/28 . . . . (Hydrogenated) phenalenes
C07C 2103/30 . . . containing seven-membered rings
C07C 2103/32 . . . . (Hydrogenated) dibenzocycloheptenes
C07C 2103/34 . . . . (Hydrogenated) benzoheptalenes
C07C 2103/36 . . . containing eight-membered rings
C07C 2103/38 . . . containing rings with at least nine members
C07C 2103/40 . . containing four condensed rings
C07C 2103/42 . . . containing only six-membered rings
C07C 2103/44 . . . . (Hydrogenated) naphthacenes
C07C 2103/46 . . . . . 1,4,4a,5,5a,6,11,12a -Octahydronaphthacenes, e.g. tetracyclines
C07C 2103/48 . . . . (Hydrogenated) chrysenes
C07C 2103/50 . . . . (Hydrogenated) pyrenes
C07C 2103/52 . . containing five condensed rings
C07C 2103/54 . . containing more than five condensed rings

C07C 2103/56 . Ring systems containing bridged rings
C07C 2103/58 . . containing three rings
C07C 2103/60 . . . containing at least one ring with less than six members
C07C 2103/62 . . . . containing three- or four-membered rings
C07C 2103/64 . . . . . having a tricyclo[2.2.1.0(2,6)]hept-structure
C07C 2103/66 . . . . containing five-membered rings
C07C 2103/68 . . . . . (Hydrogenated) dicyclopentadienes
C07C 2103/70 . . . containing only six-membered rings
C07C 2103/72 . . . . (Hydrogenated) ethanonaphthalenes
C07C 2103/74 . . . . Adamantanes
C07C 2103/76 . . . containing at least one ring which contains more than six ring members
C07C 2103/78 . . . . containing seven-membered rings
C07C 2103/80 . . . . containing eight-membered rings
C07C 2103/82 . . . . . having three condensed rings with in total fourteen carbon atoms and having a having a [5.4.3.0(1,8)] ring structure, e.g. pleuromutiline
C07C 2103/84 . . . . containing rings with more than eight members
C07C 2103/86 . . containing four rings
C07C 2103/88 . . . (Hydrogenated) ethanoanthracenes
C07C 2103/90 . . containing more than four rings
C07C 2103/91 . . . (Hydrogenated) polycyclopentadienes

C07C 2103/92 . with a condensed ring system consisting of at least two mutually uncondensed

aromatic ring systems, linked by an annular structure formed by carbon chains on non-adjacent positions of the aromatic system, e.g. cyclophanes

C07C 2103/93 . Spiro compounds

C07C 2103/94 . . containing "free" spiro atoms

C07C 2103/95 . . containing "not free" spiro atoms

C07C 2103/96 . . . containing at least one ring which contains less than six members

C07C 2103/97 . . . . containing five-membered rings

C07C 2103/98 . . . containing at least one ring which contains more than six ring members

C07C 2103/99 . . . . containing eight-membered rings

C07C 2104/00 **Fullerenes, e.g. C60 (buckminsterfullerene) or C70**

C07C 2521/00 **Catalysts comprising the elements, oxides or hydroxides of magnesium, boron, aluminium, carbon, silicon, titanium, zirconium or hafnium**

NOTE

The indexing codes of group C07C 2521/00 are associated with groups C07C 1/00 to C07C 6/00.

C07C 2521/02 . Boron or aluminium
Oxides or hydroxides thereof

C07C 2521/04 . . Alumina

C07C 2521/06 . Silicon, titanium, zirconium or hafnium
Oxides or hydroxides thereof

C07C 2521/08 . . Silica

C07C 2521/10 . Magnesium
Oxides or hydroxides thereof

C07C 2521/12 . Silica and alumina

C07C 2521/14 . Silica and magnesia

C07C 2521/16 . Clays or other mineral silicates

C07C 2521/18 . Carbon

C07C 2523/00 **Catalysts comprising metals or metal oxides or hydroxides, not provided for in group C07C 2521/00** (C07C 2521/16 takes precedence)

NOTE

The indexing codes of group C07C 2523/00 are associated with groups C07C 1/00 to C07C 6/00.

C07C 2523/02 . of the alkali- or alkaline earth metals or beryllium
C07C 2523/04 . . Alkali metals

C07C 2523/06 . of zinc, cadmium or mercury

C07C 2523/08 . of gallium, indium or thallium

C07C 2523/10 . of rare earths

C07C 2523/12 . of actinides

C07C 2523/14 . of germanium, tin or lead

C07C 2523/16 . of arsenic, antimony, bismuth, vanadium, niobium, tantalum, polonium, chromium, molybdenum, tungsten, manganese, technetium or rhenium
C07C 2523/18 . . Arsenic, antimony or bismuth
C07C 2523/20 . . Vanadium, niobium or tantalum
C07C 2523/22 . . . Vanadium
C07C 2523/24 . . Chromium, molybdenum or tungsten
C07C 2523/26 . . . Chromium
C07C 2523/28 . . . Molybdenum
C07C 2523/30 . . . Tungsten
C07C 2523/31 . . . combined with bismuth
C07C 2523/32 . . Manganese, technetium or rhenium
C07C 2523/34 . . . Manganese
C07C 2523/36 . . . Rhenium

C07C 2523/38 . of noble metals
C07C 2523/40 . . of the platinum group metals
C07C 2523/42 . . . Platinum
C07C 2523/44 . . . Palladium
C07C 2523/46 . . . Ruthenium, rhodium, osmium or iridium
C07C 2523/48 . . Silver or gold
C07C 2523/50 . . . Silver
C07C 2523/52 . . . Gold
C07C 2523/54 . . combined with metals, oxides or hydroxides provided for in groups C07C 2523/02 to C07C 2523/36
C07C 2523/56 . . . Platinum group metals
C07C 2523/58 . . . . with alkali- or alkaline earth metals or beryllium
C07C 2523/60 . . . . with zinc, cadmium or mercury
C07C 2523/62 . . . . with gallium, indium, thallium, germanium, tin or lead
C07C 2523/63 . . . . with rare earths or actinides
C07C 2523/64 . . . . with arsenic, antimony, bismuth, vanadium, niobium, tatalum, polonium, chromium, molybdenum, tungsten, manganese, technetium or rhenium
C07C 2523/644 . . . . . Arsenic, antimony or bismuth

C07C 2523/648 . . . . . Vanadium, niobium or tantalum
C07C 2523/652 . . . . . Chromium, molybdenum or tungsten
C07C 2523/656 . . . . . Manganese, technetium or rhenium
C07C 2523/66 . . . Silver or gold
C07C 2523/68 . . . . with arsenic, antimony, bismuth, vanadium, niobium, tatalum, polonium, chromium, molybdenum, tungsten, manganese, technetium or rhenium

C07C 2523/70 . of the iron group metals or copper
C07C 2523/72 . . Copper
C07C 2523/74 . . Iron group metals
C07C 2523/745 . . . Iron
C07C 2523/75 . . . Cobalt
C07C 2523/755 . . . Nickel
C07C 2523/76 . . combined with metals, oxides or hydroxides provided for in groups C07C 2523/02 to C07C 2523/36
C07C 2523/78 . . . with alkali- or alkaline earth metals or beryllium
C07C 2523/80 . . . with zinc, cadmium or mercury
C07C 2523/825 . . . with gallium, indium or thallium
C07C 2523/83 . . . with rare earths or actinides
C07C 2523/835 . . . with germanium, tin or lead
C07C 2523/84 . . . with arsenic, antimony, bismuth, vanadium, niobium, tantalum, polonium, chromium, molybdenum, tungsten, manganese, technetium or rhenium
C07C 2523/843 . . . . Arsenic, antimony or bismuth
C07C 2523/847 . . . . Vanadium, niobium or tantalum
C07C 2523/85 . . . . Chromium, molybdenum or tungsten
C07C 2523/86 . . . . . Chromium
C07C 2523/88 . . . . . Molybdenum
C07C 2523/881 . . . . . and iron
C07C 2523/882 . . . . . and cobalt
C07C 2523/883 . . . . . and nickel
C07C 2523/885 . . . . . and copper
C07C 2523/887 . . . . . containing in addition other metals, oxides or hydroxides provided for in groups C07C 2523/02 to C07C 2523/36
C07C 2523/888 . . . . . Tungsten
C07C 2523/889 . . . . Manganese, technetium or rhenium
C07C 2523/89 . . combined with noble metals

C07C 2525/00 **Catalysts of the Raney type**

NOTE

The indexing codes of group C07C 2525/00 are associated with groups C07C 1/00 to C07C 6/00.

C07C 2525/02 . Raney nickel

C07C 2527/00 **Catalysts comprising the elements or compounds of halogens, sulfur, selenium, tellurium, phosphorus or nitrogen**
Catalysts comprising carbon compounds

NOTE

Metal catalysts or metal oxide catalysts activated or conditioned by halogens, sulfur or phosphorus, or compounds thereof are indexed in the appropriate groups for metal or metal oxide catalysts.

The indexing codes of group C07C 2527/00 are associated with groups C07C 1/00 to C07C 6/00.

C07C 2527/02 . Sulfur, selenium or tellurium Compounds thereof
C07C 2527/03 . . Acids of sulfur other than sulfhydric acid or sulfuric acid, e.g. halosulfonic acids
C07C 2527/04 . . Sulfides
C07C 2527/043 . . . with iron group metals or platinum group metals
C07C 2527/045 . . . . Platinum group metals
C07C 2527/047 . . . with chromium, molybdenum, tungsten or polonium
C07C 2527/049 . . . . with iron group metals or platinum group metals
C07C 2527/051 . . . . Molybdenum
C07C 2527/053 . . Sulfates or other compounds comprising the anion (SnO3n+1)2-
C07C 2527/054 . . . Sulfuric acid or other acids with the formula H2Sn03n+1
C07C 2527/055 . . . with alkali metals, copper, gold or silver
C07C 2527/057 . . Selenium or tellurium Compounds thereof

C07C 2527/06 . Halogens Compounds thereof
C07C 2527/08 . . Halides (C07C 2527/122 to C07C 2527/138 take precedence)
C07C 2527/10 . . . Chlorides
C07C 2527/11 . . . . Hydrogen chloride
C07C 2527/12 . . . Fluorides
C07C 2527/1206 . . . . Hydrogen fluoride
C07C 2527/1213 . . . . Boron fluoride
C07C 2527/122 . . Compounds comprising a halogen and copper
C07C 2527/125 . . Compounds comprising a halogen and scandium, yttrium, aluminium, gallium, indium or thallium
C07C 2527/126 . . . Aluminium chloride
C07C 2527/128 . . Compounds comprising a halogen and an iron group metal or a platinum group metal
C07C 2527/13 . . . Platinum group metals
C07C 2527/132 . . Compounds comprising a halogen and chromium, molybdenum, tungsten or

polonium

C07C 2527/133 . . Compounds comprising a halogen and vanadium, niobium, tantalium, antimonium or bismuth

C07C 2527/135 . . Compounds comprising a halogen and titanum, zirconium, hafnium, germanium, tin or lead

C07C 2527/138 . . Compounds comprising a halogen and an alkaline earth metal, magnesium, beryllium, zinc, cadmium or mercury

C07C 2527/14 . Phosphorus
Compounds thereof

C07C 2527/16 . . containing oxygen

C07C 2527/167 . . . Phosphates or other compounds comprising the anion (PnO3n+1)(n+2)-

C07C 2527/173 . . . . Phosphoric acid or other acids with the formula Hn+2PnO 3n+1

C07C 2527/18 . . . with metals (phosphates C07C 2527/167)

C07C 2527/182 . . with silicon

C07C 2527/185 . . with iron group metals or platinum group metals

C07C 2527/186 . . with arsenic, antimony, bismuth, vanadium, niobium, tantalum, polonium, chromium, molybdenum, tungsten, manganese, technetium or rhenium

C07C 2527/187 . . . with manganese, technetium or rhenium

C07C 2527/188 . . . with chromium, molybdenum, tungsten or polonium

C07C 2527/19 . . . . Molybdenum

C07C 2527/192 . . . . . with bismuth

C07C 2527/195 . . . with vanadium, niobium or tantalum

C07C 2527/198 . . . . Vanadium

C07C 2527/199 . . . . . with chromium, molybdenum, tungsten or polonium

C07C 2527/20 . Carbon compounds

C07C 2527/22 . . Carbides

C07C 2527/224 . . . Silicon carbide

C07C 2527/228 . . . . with phosphorus, arsenic, antimony or bismuth

C07C 2527/232 . . Carbonates

C07C 2527/236 . . . Hydroxy carbonates

C07C 2527/24 . Nitrogen compounds

C07C 2527/25 . . Nitrates

C07C 2527/26 . . Cyanides

C07C 2529/00 Catalysts comprising molecular sieves

NOTE

The indexing codes of group C07C 2529/00 are associated with groups C07C 1/00 to C07C 6/00.

C07C 2529/03 . not having base-exchange properties

C07C 2529/035 .. Crystalline silica polymorphs, e.g. silicalites

C07C 2529/04 . having base-exchange properties, e.g. crystalline zeolites, pillared clays

C07C 2529/05 .. Pillared clays

C07C 2529/06 .. Crystalline aluminosilicate zeolites
Isomorphous compounds thereof

C07C 2529/064 ... containing iron group metals, noble metals or copper

C07C 2529/068 .... Noble metals

C07C 2529/072 .... Iron group metals or copper

C07C 2529/076 ... containing arsenic, antimony, bismuth, vanadium, niobium, tantalum, polonium, chromium, molybdenum, tungsten, manganese, technetium or rhenium

C07C 2529/08 ... of the faujasite type, e.g. type X or Y

C07C 2529/10 .... containing iron group metals, noble metals or copper

C07C 2529/12 ..... Noble metals

C07C 2529/14 ..... Iron group metals or copper

C07C 2529/16 .... containing arsenic, antimony, bismuth, vanadium, niobium, tantalum, polonium, chromium, molybdenum, tungsten, manganese, technetium or rhenium

C07C 2529/18 ... of the mordenite type

C07C 2529/20 .... containing iron group metals, noble metals or copper

C07C 2529/22 ..... Noble metals

C07C 2529/24 ..... Iron group metals or copper

C07C 2529/26 .... containing arsenic, antimony, bismuth, vanadium, niobium, tantalum, polonium, chromium, molybdenum, tungsten, manganese, technetium or rhenium

C07C 2529/40 ... of the pentasil type, e.g. types ZSM-5, ZSM-8 or ZSM-11

C07C 2529/42 .... containing iron group metals, noble metals or copper

C07C 2529/44 ..... Noble metals

C07C 2529/46 ..... Iron group metals or copper

C07C 2529/48 .... containing arsenic, antimony, bismuth, vanadium, niobium, tantalum, polonium, chromium, molybdenum, tungsten, manganese, technetium or rhenium

C07C 2529/50 ... of the eroionite or offretite type, e.g. zeolite T

C07C 2529/52 .... containing iron group metals, noble metals or copper

C07C 2529/54 ..... Noble metals

C07C 2529/56 ..... Iron group metals or copper

C07C 2529/58 .... containing arsenic, antimony, bismuth, vanadium, niobium, tantalum, polonium, chromium, molybdenum, tungsten, manganese, technetium or rhenium

C07C 2529/60 ... of the type L

C07C 2529/61 .... containing iron group metals, noble metals or copper

C07C 2529/62 ..... Noble metals

C07C 2529/63 ..... Iron group metals or copper

C07C 2529/64 .... containing arsenic, antimony, bismuth, vanadium, niobium, tantalum, polonium, chromium, molybdenum, tungsten, manganese, technetium or rhenium

C07C 2529/65 . . . of the ferrierite type, e.g. types ZSM-21, ZSM-35 or ZSM-38
C07C 2529/66 . . . . containing iron group metals, noble metals or copper
C07C 2529/67 . . . . . Noble metals
C07C 2529/68 . . . . . Iron group metals or copper
C07C 2529/69 . . . . containing arsenic, antimony, bismuth, vanadium, niobium, tantalum, polonium, chromium, molybdenum, tungsten, manganese, technetium or rhenium
C07C 2529/70 . . . of types characterised by their specific structure not provided for in groups C07C 2529/08 to C07C 2529/65
C07C 2529/72 . . . . containing iron group metals, noble metals or copper
C07C 2529/74 . . . . . Noble metals
C07C 2529/76 . . . . . Iron group metals or copper
C07C 2529/78 . . . . containing arsenic, antimony, bismuth, vanadium, niobium, tantalum, polonium, chromium, molybdenum, tungsten, manganese, technetium or rhenium
C07C 2529/80 . . . Mixtures of different zeolites

C07C 2529/82 . Phosphates
C07C 2529/83 . . Aluminophosphates (APO compounds)
C07C 2529/84 . . Aluminophosphates containing other elements, e.g. metals, boron
C07C 2529/85 . . . Silicoaluminophosphates (SAPO compounds)

C07C 2529/86 . Borosilicates
Aluminoborosilicates

C07C 2529/87 . Gallosilicates
Aluminogallosilicates
Galloborosilicates

C07C 2529/88 . Ferrosilicates
Ferroaluminosilicates

C07C 2529/89 . Silicates, aluminosilicates or borosilicates of titanium, zirconium or hafnium

C07C 2531/00 Catalysts comprising hydrides, coordination complexes or organic compounds

NOTE

The indexing codes of group C07C 2531/00 are associated with groups C07C 1/00 to C07C 6/00.

C07C 2531/02 . containing organic compounds or metal hydrides
C07C 2531/025 . . Sulfonic acids
C07C 2531/04 . . containing carboxylic acids or their salts
C07C 2531/06 . . containig polymers
C07C 2531/08 . . . Ion-exchange resins
C07C 2531/10 . . . . sulfonated

C07C 2531/12 . . containing organo-metallic compounds or metal hydrides
C07C 2531/14 . . . of aluminium or boron

C07C 2531/16 . containing coordination complexes
C07C 2531/18 . . containing nitrogen, phosphorus, arsenic or antimony
C07C 2531/20 . . Carbonyls
C07C 2531/22 . . Organic complexes
C07C 2531/24 . . Phosphines

C07C 2531/26 . containing in addition, inorganic metal compounds not provided for in groups C07C 2531/02 to C07C 2531/24
C07C 2531/28 . . of the platinum group metals, iron group metals or copper
C07C 2531/30 . . . Halides
C07C 2531/32 . . of manganese, technetium or rhenium
C07C 2531/34 . . of chromium, molybdenum or tungsten
C07C 2531/36 . . of vanadium, niobium or tantalum
C07C 2531/38 . . of titanium, zirconium or hafnium